THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXXII. NEW YORK, SATURDAY, APRIL 16, 1898. No. 16.

ORIGINAL ARTICLES.

REPORT OF A CASE OF PROSTATIC HYPERTROPHY IN A VERY OLD MAN; OPERATION BY BOTTINI'S METHOD.

BY LEONARD WEBER, M.D.,
OF NEW YORK;
PROFESSOR OF MEDICINE IN THE POST-GRADUATE MEDICAL SCHOOL; VISITING PHYSICIAN TO THE POST-GRADUATE HOSPITAL; CONSULTING PHYSICIAN TO ST. MARK'S HOSPITAL.

IT is about ten years since I first learned of Dr. Bottini's operation for the relief of prostatic hypertrophy. He said that by burning three or four superficial grooves into the prostate with a galvanocautery loop, moving like a Maisonneuve urethrotome, in an instrument similar to that for crushing a calculus in the bladder, the sore distress of the sufferer would be relieved and the use of the catheter might be dispensed with.

Bottini's proposition did not receive the attention it deserved, mainly I believe, because surgeons are as a rule not much inclined to operate with the galvanocautery in the dark, and partly also, I take it, because the author failed to state in his early communications on the subject what he expected to take place after the operation. Was it to be simply new and permanent channels made and maintained by the cutting of the cautery, or the restoration of the natural prostatic urethra by a certain degree of atrophy following the superficial morcellation of the gland, or both? Possibly also a strong suspicion of the very uncertain work of the incisor may have induced us to stand aloof and assume an expectant attitude. Meantime, various operations, some of them mutilating, have been tried for the relief of this distressing condition—from the recent division of the spermatic cord to castration and excision of the prostate. So it was not until quite recently, when Bottini's instrument had been modified and improved by Freudenberg of Berlin, and a few successful operations at that city had been performed with it, that the profession in general began to be interested in the cautery operation.

After reading Dr. Willy Meyer's report of his case and demonstration of the Bottini incisor, I laid the matter before my patient, a man aged ninety-three years, comparatively hale and hearty in spite of his great age, who had been a prostatic sufferer during the previous five years and showed, besides the vesical catarrh, symptoms of pyelitis during the last twelve months, though the muscular force of his bladder continued to be fairly good. His consent to the operation having been obtained, my associate Dr. F. Torck, obtained one of Freudenberg's instruments, and an instrument-maker furnished us a portable storage-battery supplying a steady current of four volts, which is sufficiently strong to heat the platinum loop to a red heat and keep it at the same temperature as long a time as is required for performing the operation. The day before the operation Dr. Torck and myself had made ourselves thoroughly familiar with the working of the instrument and battery.

Having repeatedly examined the patient *per rectum*, I knew the right prostatic lobe to be much more enlarged than the left, and it was therefore agreed that an upper, a lower, and a right lateral cut should be made. Everything being ready, the patient was anesthetized with a mixture of chloroform and ether, equal parts. I felt quite certain that the patient would bear the chloroform-ether mixture, and we were not disappointed.

No difficulty was experienced in introducing the instrument far enough to have its short beak within the neck of the bladder. Having turned on the full current, and having counted slowly from one to five, Dr. Torck proceeded. A cut was made about 1½ centimeters in length without difficulty, and another, and then a third, but there was neither any sizzling nor odor of burnt flesh. There was, however, considerable oozing of blood from the meatus. What was the matter? We had forgotten to close the short circuit in the instrument, and it was the cold steel only, which, plowing along the prostatic urethra, had produced a superficial laceration. Our chagrin was great, but there was only one thing to do, *i. e.*, do the operation over again. After the first cut now there was a very decided odor of burnt flesh, and the subsequent cuts were readily made. The cooling apparatus attached to the instrument along its entire length worked admirably, and gave us no trouble.

When I first examined the instrument used in this operation, it struck me that the arrangement for closing and opening the circuit in the instrument itself was unnecessary and would tend to complicate matters in the handling of a tool, which is not a simple apparatus by any means, but requires much care in its use. By means of the switch of

Vetter's storage-battery, the current is under complete control and one is able to instantly turn it on or off.

The operation was performed on Wednesday, January 5th, at noon. At 1 P.M. the patient was in bed, and at 2 P.M. he was fully conscious. He had as good a pulse as before and during the operation. There was no nausea or other unpleasant symptoms. A hypodermic injection of morphia, ¼-grain, was given. At 4 P.M. he took some food, at 6 he passed urine, the half of which was blood, and continued to do so every half hour until 6 A.M. of January 6th, when the hemorrhage ceased and did not recur. In all, he lost about half a pint of blood, his pulse remaining good, and his temperature normal. Ice-bags applied to the perineum and about the symphysis pubis appeared to be effective in controlling hemorrhage.

January 6th: Temperature, 99.5° F.; pulse, 86; frequent micturition of rather clear urine, one to two ounces at a time; general condition good; appetite excellent; Vichy water was freely given.

January 7th: Temperature, 99°F.; pulse, 84. The patient was made more comfortable as to tenesmus by suppositories containing morphin and extract of belladonna, ¼-grain each, two being inserted during the twenty-four hours.

January 8th: Temperature and pulse practically normal. A gentle attempt to introduce a flexible catheter into the bladder was successful, and during the two weeks following the operation the bladder was irrigated twice daily with a weak solution of boric acid.

The patient continued to do well. While there was generally between three and four ounces of residual urine before the operation, but one and a half to two ounces are now drawn before washing the bladder. Micturition, to be sure, is still very frequent, about every twenty minutes, and since January 9th there has been some fine detritus in the urine, but no shreds of mucous membrane, nor has the microscope shown anything worth noting.

From January 10th to January 24th the patient still suffered considerably from acute exacerbation of his chronic cystitis, undoubtedly in consequence of the operation. After the latter date he rapidly improved, and February 3d was able to be about again.

February 15th: There is about two ounces of residual urine; he can hold his water sometimes from two to four hours, but more often passes it hourly, and has to get up five or six times during the night to micturate.

From about February 5th to March 1st the patient's bladder was irrigated twice daily with a 1–8000 solution of nitrate of silver, but vesical catarrh is still present with discharge of slightly turbid urine. Now and again there will be a gush of mucopurulent urine. The acute symptoms have all passed away, and the patient goes about, drives, and enjoys life in the way he was used to, and can void his urine without using a catheter. There has been practically no change in the amount of residual urine. True, there is more often one ounce than two or three. March 1st, I examined the prostate *per rectum;* the size and configuration of the gland are the same as before the operation, in fact, I did not expect any appreciable atrophy to follow the cauterization.

It is but two months since the operation was performed, and too early to say more than a single thing in regard to success in this case: The patient is able to micturate voluntarily and to empty his bladder down to line of residual urine, while before the operation he could not do more than press out from a few drops to an ounce without using a catheter. For just so much the prostatic portion of the urinary tract has been improved by the galvanocautery operation, and it is reasonable to hope and believe that this improved condition may be maintained. As to reduction of the size of the hypertrophied prostate, nothing has been gained as yet, nor is such reduction likely to occur.

The cuts might be made deeper than they probably were made in this case by holding the handle of the instrument more firmly up and toward the abdomen, while an assistant endeavors to hook the prostate, with finger in the rectum, and press it against the incisor as it is burning into the gland. But even so, nothing more than cuts one-half centimeter in depth can be made, which, when healed, will have led to the formation of grooves, one to three millimeters in depth, and the patient is not likely to be benefited more than our patient has been. Cutting into the gland with the knife or cautery-loop is not equal to resection and cannot induce an appreciable reduction in the size of the hypertrophied organ.

It is not my province to say anything about the management of prostatic hypertrophy; the less so, as everything that can be said and advised has quite recently been stated by Dr. Bolton Bangs in both a concise and comprehensive manner in a paper published in the MEDICAL NEWS for February 12, 1898. So long as we succeed in keeping the bladder aseptic and the patient is contented to lead a catheter life, there is no indication for an operation; but when a patient objects to the further use of the catheter or the bladder has become infected, I would be inclined to advise the performance of a Bottini operation first of all, as it appears to be a good and safe method to rescue the patient from catheter slavery. In the presence of pyelonephritis to any extent or chronic

nephritis, I would not do this or any other cutting operation within the bladder nor allow any to be done upon a patient of mine, unless some vital indication were presented. I have performed a few operations for stone—not more than fifteen altogether. I have cut for stricture of the urethra many times. In my earlier experience I operated on some patients in that way who had chronic kidney disease complicating vesical calculus; they all died of acute exacerbation of the nephritis soon after the operation. With all patients whose kidneys were relatively sound, I had no trouble. And judging by what I have learned in my intercourse with surgeons of large practice in diseases of the urinary organs, their experience coincides with my own.

THE QUARANTINE LAWS AND NATIONAL CONTROL OF QUARANTINE.[1]

By JAMES H. McCALL, M.D.,
OF HUNTINGDON, TENN.

THE recent researches of Sanarelli and Sternberg show, to all practical purposes, that yellow fever is caused by a specific virus which when inoculated into the body of a human being will produce the characteristic symptoms of this disease. It is not the scope of this paper to determine which of these distinguished bacteriologists has priority in this discovery, but suffice it to say, that the germ has been isolated in a sufficient number of cases of typical yellow fever to conclude that it is the cause of the disease.

The natural habitat of this germ is in the tropical regions and not in the United States; however, if it is transplanted from its native soil to our Gulf Coast, experience has shown that it thrives wonderfully, and is even more virulent here than in the tropical regions, and it is even more fatal in our Middle Southern States than on the Gulf Coast, as the records of the epidemics which have invaded Memphis and New Orleans will show.

So far, all quarantine regulations to prevent the introduction of yellow fever into the United States have utterly failed. In the recent epidemic it seems that the first case developed at Ocean Springs, Miss., a summer-resort. The disease soon became epidemic at Ocean Springs, and immediately spread to Biloxi, New Orleans, Mobile, and a number of other southern cities and towns, reaching as far north as Cairo, Ill., and Memphis, Tenn., and had it not been for the lateness of the season we no doubt would have had a repetition of the disastrous epidemic of 1878. In this as in other diseases prevention is of more importance than treatment, and since it is agreed that yellow fever is caused by a specific microbe, the only rational prophylaxis is the prevention of the ingress of the specific germ into our country.

Our present quarantine laws are not by any means what they should be. They cause the people to feel a sense of security until they are confronted with the fact that the disease is in their midst.

There are at present 68 quarantine stations on our seaboard, 44 of which are simple inspection stations and 24 quarantine stations proper. Of the former, 6 are National and 38 are State or local. Of the quarantine-stations proper 11 are National and 13 are State or local; *vis.*, 17 stations are under National control and 51 under State or municipal control. The National stations are, of course, operated under but one law, but the 51 State or municipal stations are operated under fifty-one separate and distinct laws. With this difference in laws and regulations it is impossible to institute an effective and uniform quarantine. An infected vessel would naturally seek to enter a port at which the quarantine laws were most lenient. We have about 12,000 miles of seacoast, and this vast territory is under the control of 68 quarantine stations, an average of 176 miles of seaboard under the jurisdiction of each station. It can be readily seen that the number of stations is altogether too small, compared with the territory involved, if satisfactory work is to be accomplished.

Legislation in the direction of improvement in quarantine laws has indeed been retrogressive, as is shown by the fact that the laws, with but few amendments, under which our quarantine regulations are enforced were enacted one hundred years ago. Following the great yellow-fever epidemic of 1796, Congress passed an act directing the use of the Revenue Service in carrying out the quarantine and health laws of the several States. This law was repealed in 1799, and an act was passed in which the possession and exercise of quarantine powers by the States was fully and distinctly recognized, and certain Federal officers, such as the custom's officials, masters of revenue cutters, and military officers commanding posts or stations on the seacoast being required to aid in the execution of the health laws of the States according to their respective powers and within their respective precincts, and subject to the direction of the Secretary of the Treasury. This law, passed in 1799, is the one under which our quarantine regulations are enforced. Indeed, a few acts have been passed by Congress since that time, with a view of experimenting with the subject, these, however, were all repealed after a few years' trial. In 1878, Congress passed an act empowering the Surgeon-General of the Marine Hospital Service to frame rules and regulations for the purpose of preventing the introduction of contagious diseases into the United States,

[1] Read at a meeting of the Medical Society of the State of Tennessee, held at Jackson, Tenn., April 14, 1898.

which rules and regulations should be subject to the approval of the President, but should not conflict with or impair any sanitary laws or regulations of any State or municipal authority which then existed or might thereafter be enacted. One of the orders published under the authority of this act prohibited all vessels from the Black Sea, conveying rags, furs, clothing, etc., and all vessels from the Mediterranean and Red Seas, carrying such articles from Russia, from entering any port of the United States. This bill was greatly opposed by New England commercial bodies, and in subsequent legislation was modified. In March, 1879, an act was passed authorizing a National Board of Health, consisting of seven members to be appointed by the President, not more than one of whom was to be from any one State, and four National representatives detailed from the Attorney-General's Department, the Medical Departments of the Army and Navy, and from the Marine Hospital Service. The most important duties of this board were: "To obtain information upon all matters affecting public health, to advise the several different departments of the Government, the executives of the several States, and the commissioners of the District of Columbia on all questions submitted by them, whenever in the opinion of the board such advice may tend to the preservation and improvement of public health."

In June, 1879, Congress authorized the National Board of Health "to cooperate with, and so far as it lawfully could, aid State and municipal boards of health in the execution and enforcement of the rules and regulations of such boards." The National Board of Health was also authorized to make rules and regulations to be observed by vessels sailing from any foreign port at which were contagious or infectious diseases to any port of the United States, and to obtain information of the sanitary condition of foreign ports from which contagious or infectious diseases might be brought into the United States. The last section of this act states: "That this act shall not continue in force for a longer period than four years from the date of its approval." This law expired at the end of four years, a reenactment was prevented, and Congress placed an epidemic fund in the hands of the President to be used at his discretion in preventing and suppressing epidemics and maintaining quarantines at exposed points. This fund has been transferred to the Treasury Department, and the expenses of the refuge stations established by the National Board of Health are now paid from it by the Marine Hospital Service. With the exception of the action of Congress in creating this fund there has been no National legislation within the past hundred years—which protects the country from invasion by exotic diseases—and our facilities for preventing the introduction of contagious diseases are but little better now than they were in the epidemic of 1798, which devastated Philadelphia, New York, Boston, and other northeastern cities.

In 1888 an act was passed authorizing the establishment of seven additional quarantine stations, which were placed under the control and management of the Marine Hospital Service. In 1893 an act granting additional powers and imposing additional duties upon the Marine Hospital Service was passed, and at the same time the act of March 3, 1879, establishing a National Board of Health, was repealed, and the Secretary of the Treasury was directed to obtain possession of any property, records, etc , which were formerly the property of the National Board of Health. The Marine Hospital Service was given practically the same power as was given the National Board of Health in the act of March 3, 1879, and has accomplished a great amount of good for humanity, notwithstanding the difficulty of operating under the different laws of the various States.

Dr. H. E. Brown, U. S. A., by joint resolution in Congress in 1872, was authorized to make a thorough inspection of southern ports exposed to yellow fever, and in his report says: "These quarantines, being established by State or municipal authority, lack that uniformity which is absolutely necessary to their efficiency, are not founded on rational views of the pathology of the disease, and are generally defective in their administration." The same condition found by Dr. Brown in 1872 exists to-day.

The entire system of quarantine should be in the hands of the National Government, and instead of the Government assisting the States in epidemics, the States should assist the Government. A system of sanitary inspection should be inaugurated, under the control of the Federal Government. The sanitary inspectors should have the cooperation of the State and local health boards and railroad officials.

In the recent outbreak of yellow fever in the South the execution of the quarantine laws in the different localities worked a greater hardship on the commercial interests of the country than the disease itself. Each municipal and county board was supreme authority within itself, and recklessly quarantined against any and all points upon the slightest rumor, without any investigation to ascertain the facts in the case. One county in Western Tennessee went so far as to station a shotgun brigade on the county line for the purpose for preventing any trains from passing through the county. These trains carried United States mail, and it took the Federal authorities but a short time to show the county officials

the ridiculousness of their order. Such a condition of affairs is not only a great inconvenience to the traveling public, but is also the cause of great financial loss to the transportation companies.

There are at present before Congress three bills, the object of each being to place the National Government in control of all quarantine laws. One bill provides for the establishment of a Bureau of Public Health, under the control of the Treasury Department. Another bill provides for an executive department to be known as the Department of Public Health. The other bill is an amendment to an act granting additional quarantine powers and imposing additional duties upon the Marine Hospital Service, and transfers the execution of the quarantine laws from the States to the National Government. Each of these bills is a step in the right direction, and it is to be hoped that Congress will act favorably upon one of them at an early date.

Immediate steps should be taken by the Marine Hospital Service to thoroughly disinfect every house in which there was a case of yellow fever during the past season; then, if Congress will place the quarantine laws absolutely under Federal control, there will be no danger of a recurrence ot yellow fever in the United States.

TROPHIC KERATITIS, WITH THE REPORT OF A CASE OCCURRING IN CAISSON DISEASE.

By GEORGE C. HARLAN, M.D.,
OF PHILADELPHIA.

J. B., aged twenty-nine years, came to the Eye Clinic of the Pennsylvania Hospital, October 22, 1895. He had been employed on the construction of the bridge built across the Delaware by the Pennsylvania Railroad Company, and had worked in a caisson under an atmospheric pressure of from eighteen to thirty pounds per square inch. He had commenced in June, and had worked in the caisson eight hours a day continuously until sixty feet below the surface, and then six hours a day, three hours at a time, with an intermission of three hours. Several of his fellow workmen had been taken from the caisson unconscious, one had died, and one was paralyzed. We made a search for the latter, but were not successful. In the latter part of July the patient suffered much from giddiness, debility, loss of appetite and nausea, and finally from frequent vomiting. After the first of August there was occasional numbness of the whole right side. Early in September, when he was obliged to stop work, the right eye commenced to be irritable and painful.

There was a superficial ulcer of the cornea about three millimeters in diameter, near the outer border, with irregular, ill-defined margins and a grayish, infiltrated surface, and the whole cornea was steamy. There was a dense pericorneal zone, but no corneal vessels. Some slender post-synechiæ showed a moderate iritis. The fundus could not be seen. There was anesthesia, almost complete, of the cornea, conjunctiva, and of all parts of the face supplied by the ophthalmic and superior maxillary branches of the fifth nerve. There was also loss of taste on the right side of the tongue. There was no other sensory paralysis and no motor, unless for a slight weakness of the masseter muscle, which was not positively determined. The temperature on the right side of the mouth was three-fifths of a degree higher than on the left.

Four days later the area of the ulcer had increased and a small hypopyon appeared, which, however, lasted only a few days, and by the middle of November there was a decided improvement in the condition of the cornea. The ulcer was filling up, and there was a raised line of demarcation about its margins, and several small, deep, corneal vessels were noticed. On December 10th a well-defined opacity occupied the position of the ulcer, and the whole cornea had become vascular. There was little or no improvement in sensation.

The only general treatment adopted was at first mercury and iodid, administered about a month with a view to the possibility of specific complication, though there was no evidence of such, and afterward the internal use of quinin and strychnia, with good diet and hospital care. Locally, atropia and boric acid, hot stupes, and an occlusive bandage were used. About the last of January the patient's general condition had improved so much that he felt well enough to go to work, and was allowed to leave the hospital, an ankyloblepharon having been first performed to insure protection to the insensitive cornea. He soon afterward went to a distant city, and his new address could not be obtained.

It can hardly be claimed that exposure to irritants was a prime cause here, as the keratitis persisted months after the cornea was carefully protected, though it is possible that if this had not been done the disease might have proved more destructive. Then, too, the iris was involved in the early stages, before the corneal affection had reached its height. Several subjects of interest are suggested by this case; for example, the unusual cause of the disease, the influence, or the existence, of trophic nerves, and the pathology of so-called neuroparalytic ophthalmia.

Anesthesia has been much less frequently recorded as a symptom of caisson disease than has motor paralysis, and both usually occur in the extremities; but the more important symptoms can always be referred to the brain and spinal cord. According to Dr. Bauer of St. Louis, "in grave cases there is paralysis of different degrees, from slight paresis to complete loss of sensation and motion," and "cerebral and spinal congestion, edema of the arachnoid, and softening of the brain and spinal cord" are found post-mortem. Some or all of these lesions, with, in

some cases, the addition of more or less extensive extravasations of blood, were found in the nine post-mortems on the bodies of workmen who died during the building of the St. Louis and Brooklyn bridges. The cerebral and spinal lesions are explained by Dr. Andrew H. Smith and others on the theory that the brain and spinal cord, being contained in bony cavities, are less exposed to the effects of increased atmospheric pressure, and that consequently blood is driven into them from the periphery and the soft tissues. However this may be, there is no doubt that intracranial lesions do occur, and they might readily involve the Gasserian ganglion, or the fifth nerve, or its central nuclei.

The question of trophic nerves may be considered still unsettled. Of two recent prominent writers Berger says, that "experimental and clinical researches seem to prove the existence of trophic fibers in the trigeminus"; while Knies states that in neuroparalytic keratitis "we evidently have to deal with a traumatic loss of substance which is infected from the conjunctival sac. The assumption of special trophic nerves is superfluous." The subject is by no means so easily disposed of as the latter author seems to imply, as any one who attempts to explore the mass of literature which has gathered about it will be ready to admit.

Charcot says: "Defective action of the nervous system has no direct immediate influence upon the nutrition of peripheral parts; on the other hand, it is at least very probable that morbid excitation, irritation of nerves, or nerve centers will, under certain conditions, provoke the most various trophic troubles at a distance. Do these trophic lesions depend upon irritation of these hypothetic nerves, which anatomy does not recognize, and which are sometimes designated *trophic nerves?* — the theory of special trophic nerves of which Samuel has been one of the chief advocates." Charcot, while he does not admit the theory, considers it worthy of consideration because it explains better than any which preceded the pathologic phenomena observed in practice. He is inclined to attribute these phenomena to an irritation conveyed by sensitive fibers, but admits that the question still awaits solution.

According to Gowers, "Nutrition of tissue elements is largely under the influence of the nervous system. Whether this influence is exerted through special 'trophic nerves,' or through the motor, the sensory, and especially through the vasomotor nerves, is a question that has been much discussed and is still undecided. The balance of evidence is against the existence of special tropic nerves. In the case of the fifth nerve, acute trophic changes occur in the eyeball chiefly when the disease involves the Gasserian ganglion or the nerve in front of it." The author likens these changes to the acute trophic changes which occur in the skin.

The corneal lesions which follow section of the fifth nerve, or its paralysis from other causes, were formerly attributed to the loss of the trophic influence of this nerve, but since Snellen and Büttner reported that in their experiments upon rabbits these lesions did not occur if the eye were protected, they have been quite generally attributed, at least in the text-books, to loss of sensation of the cornea and its consequent injury by external irritants. Numberless cases have been recorded, and we have all met with such, which would prove this contention most satisfactorily if there were not others which, if less numerous, are equally positive on the other side of the question and can be better explained by recourse to the older theory. They are too numerous also to be set aside as exceptions, and I have seen a sufficient number of them myself to make me quite sure, while still in doubt as to the true pathology of the disease, that the mechanical theory is insufficient. I merely wish to comment on some of these cases without attempting to review the extensive literature of the subject, which would lead far beyond the limits of this paper and is, besides, familiar or accessible to all. The results of physiologic experiments have been too various and even contradictory to be conclusive. What some experimentalists have claimed to establish others have almost invariably failed to confirm, even if they have not reached opposite conclusions. Some have thought it proved that the keratitis is due to mechanical injury depending upon loss of sensation; others that it is the result of depriving the cornea of the influence of trophic nerves; and still others that it is a phenomenon, not of paralysis, but of irritation, while some authorities attribute it to a paralysis or an irritation of vasomotor fibers as distinct from trophic, and in some experiments the removal of the superior cervical ganglion alone has caused the phenomenon in question, but in others has prevented its occurrence, even when the fifth nerve has been divided.

The cornea will sometimes slough, if exposed, though perfectly sensitive, but it will by no means always do so when insensitive. An example of the former fact is found in the case of a farmer who came to me a few years ago with a corneal fistula due to complete peripheral paralysis of the facial nerve, following exposure to cold while filling his ice-house. The fifth nerve was quite healthy. The actual cautery and a protective compress promptly restored the anterior chamber, and a subsequent ankyloblepharon prevented any recurrence of the trouble. The lid margins were united a little to the nasal side of the

middle, and the patient could see well enough for all his purposes through a partial opening of the outer half of the commissure.

Among many examples of the resistance of a sensitive cornea to exposure may be mentioned the case of a patient whose eye had been completely exposed during six years by the entire destruction of the lid by a burn, but the cornea remained perfectly clear. As for the insensitive cornea, in a case which I reported some years ago a haziness of about a fourth of the cornea, which occurred during the acute stage of an infection of the fifth nerve, probably gouty, was permanent, but the rest of the cornea remained clear and bright many years, though the sensation never returned.

In absolute glaucoma, the insensitive cornea never sloughs or presents anything like the picture of neuroparalytic keratitis. It may even remain clear. Proofs are not wanting that the sensibility of the cornea and the state of its nutrition are not necessarily associated. Instances of loss of corneal sensation without inflammation are not very infrequent; and so-called neuroparalytic keratitis without loss of sensation has been observed. So, also, we may have typical neuroparalytic sloughing of the cornea without exposure.

In a case which I reported in the *Philadelphia Medical Times*, vol. iv, p. 166, the cornea, which had remained clear under prolonged exposure, commenced to suffer at the very time when it was protected by paralysis of the levator palpebræ muscles. The cranial nerves were involved one after another in the progress of an extensive sarcomatous disease of the temporal bone. The patient, a child three years of age, was brought to the Children's Hospital, August 4th, with a purulent discharge from the ear, a large polypus in the meatus, and a fluctuating swelling over the mastoid. There was complete paralysis of the facial nerves, and the left eye could not be closed. The cornea was clear and bright, and, as the eye showed no symptoms of irritation, no means were adopted to protect it. More than three weeks later, August 29th, the disease involved the third pair of nerves and produced ptosis, and it was noticed at this time that the cornea was dim. On September 1st, three days afterward, the whole cornea was hazy and its lower fourth infiltrated. At the end of three more weeks, September 17th, there was a sloughing penetrating ulcer; as the child's mother said, "the eyes seemed to be melting away." The little patient died a few days afterward, but no post-mortem was allowed beyond a partial removal of the growth which had appeared externally.

Dr. Norris has reported a case of neuroparalytic ophthalmia from intracranial disease in which the insensitive cornea sloughed, though it had been carefully protected.

Such cases are comparatively rare, but the positive proof which they offer that the cornea may suffer in connection with lesions of the fifth nerve, under conditions which exclude the mere loss of sensation as a cause, cannot be ignored. No doubt in some cases simply exposure, either with or without loss of sensation, particularly when combined with pressure, as in the case reported to the Society last year by Dr. Green and as frequently occurs in exophthalmic goiter, is competent to induce destructive keratitis; but it is equally certain that in other cases inflammation of the cornea, and even of the deeper structures of the eye, occurs as an evident result of lesions of the fifth nerve, though exposure to external irritants can be positively excluded as a cause. It is well known that the cornea is not always alone involved, but even in the earlier stages of the disease the iris is often found to be affected; and in some experimental cases hypopyon has occurred while the cornea remained sound and clear.

Instead of the sloughing or ulcerative keratitis usually met with in this form of ophthalmia, an increase of nutritive action, resulting in vascular turgescence and hypertrophy, may occur, as is illustrated by the case of a farmer's wife, forty-four years of age, who applied at the Wills Hospital with a painful affection of the left eye from which she had suffered a year. The sight was gone, and the patient complained of intense and constant pain in the eyeball, brow, and side of head. There was complete loss of sensation in the cornea and in all the other parts supplied by the fifth nerve, except a just perceptible sensitiveness of the ocular conjunctiva. There was no other paralysis and no indication of herpes. The palpebral conjunctiva was enormously thickened and the bulbar conjunctive engorged, while the cornea presented the densest pannus crassus that I have ever seen. The other eye was sound and the patient's general health was good.

The literature of this disease includes comparatively few post-mortem examinations, but Serres, Romberg, Alison, Genkin, and Haase found lesions of the Gasserian ganglion; De Schweinitz found the ciliary nerves normal, which points to a central cause though it does not exclude disease of the ganglion, and Duval and Laborde claim to have proved by extensive experimentation that there is a bulbar central nucleus a lesion of which produces the same sensitive and nutritive alterations in the eye as follow intracranial section of the fifth nerve. Panas thinks that, "we are authorized to conclude that neuroparalytic keratitis has its point of departure in

an alteration of the Gasserian ganglion, or of the nuclei of the fifth pair of nerves," which is perhaps about as far as we can confidently go in the present state of our knowledge, leaving it still undecided whether this alteration is of a paralytic or an irritative character, and whether its effects are produced through the medium of sensitive, vasomotor, or special trophic fibers.

TREATMENT OF POST-PARTUM HEMORRHAGE.[1]

BY FRANK E. LOCK, M.D.,
OF BUFFALO, N. Y.

UNDER the term post-partum hemorrhage may be included any bleeding which occurs after the delivery of a child from any part of the parturient canal. By general consent however, the term is commonly applied only to hemorrhage from the site of the placenta.

In a considerable number of instances this is a preventable accident, oftentimes depending upon causes within the power of the physician to overcome. It follows, therefore, that there must be three lines or periods of treatment: (1) prophylaxis, (2) control of the hemorrhage when it occurs, and (3) the after-treatment of the patient.

Hemorrhage from the uterus after child-birth is normally prevented by the contraction and retraction of the muscular fibers of this organ, which compress the vessels in the uterine wall, and also by thrombus formation, pressure of the fetus, if present, and by the contraction of the arteries themselves. Any condition in the mother or in the uterus which tends to prevent these factors from operating may be an exciting cause of this alarming accident. The contractile power of the uterus may be lessened by an exhausting labor, rapid artificial delivery, excessive distension due to multiple pregnancy or hydramnios, or by general or nervous disturbances on the part of the mother.

Contraction and retraction are also rendered more or less ineffectual by foreign matter in the uterine cavity, such as clots, pieces of membranes or placenta, and also from tumors, adhesion from old pelvic inflammatory disturbances, or by an over-distention of the rectum or bladder. Thrombosis may be prevented by defective contractions, or by restlessness, coughing, vomiting, or excessive movements of the patient.

Prophylaxis consists of the treatment of the patient during pregnancy, especially during the latter months, and in the proper management of labor. Any abnormality or departure from health which is amenable to treatment should be corrected. Examinations of the urine, for albumin, urea, and total solids should be frequently made. If the patient be run down, weak, or anemic, general tonic and hygienic measures must be instituted. Good results follow the administration of quinin in tonic doses during the last three or four weeks of pregnancy, especially when given in connection with the compound syrup of hypophosphites. Care should be taken to have the diet nutritious, and directions should be given in regard to proper clothing, exercise, rest, and other matters which tend to promote the general health and tone of the body.

There is much depending upon the proper management of the labor itself. It should not be allowed to continue too long, as the patient or the uterus may become exhausted; neither should it be too rapid, as thereby contractions may be delayed and the time may be insufficient to allow of thrombus formation. When necessary labor must be artificially terminated and the uterus made to contract by gentle kneading through the abdominal wall. As soon as the child is delivered it is good practice, although thought inadvisable by many, to administer ʒ i of the fluid extract of ergot by mouth or hypodermically, in order to inhibit any tendency to relaxation of the uterus should such be present. The third stage must not be hurried, and manipulation and pressure should be maintained until the placenta is delivered.

During the third stage of labor the patient should lie upon her back so that fluids may escape from the vagina without clotting. In manipulating the uterus to expel the placenta, by Credé's method, care must be taken to make pressure in the proper direction, and all traction upon the cord must be avoided. The placenta and membranes should be inspected for assurance that everything has been expelled, and intermittent pressure made over the fundus to insure firm contraction. The attendant should remain within call for at least an hour after the placenta is delivered, and should make occasional examinations of the uterus, by abdominal palpation, in order to note any tendency to unusual relaxation.

During the second stage of labor the physician should see that the following articles are accessibly placed: Davidson's syringe, in working order; ice in small pieces, brandy or whisky, ergot, morphin or laudanum, a hypodermic syringe, vinegar, iodin, hot and cold sterilized water, a large pitcher, and a Kelly's pad or substitute for it.

Unfortunately the physician often has no previous knowledge of his patient and sees her for the first time when called to attend her in labor; thus, he has no opportunity for previous preparation or treatment of the case. The occurrence of severe hemorrhage after an apparently normal delivery comes as a

[1] Second Prize Essay, MEDICAL NEWS Prize Contest.

great surprise and calls for prompt action, a steady hand, and the coolest judgment.

The physician should endeavor to call to mind Nature's methods of controlling hemorrhage and imitate her by securing contractions, thrombus formation, or, these failing, by the employment of pressure.

The pillows should be removed from beneath the patient's head to prevent syncope and the hand placed over the uterus to stimulate contractions. A hypodermic injection of a standard preparation of ergot, such as Squibb's fluid extract, or the normal liquid ergot should be administered, preferably in the anterior or outer aspect of the thigh as approximating the part against which its action is directed. If necessary cold may now be applied over the lower abdomen by means of cloths wrung out of ice-water; this should be done at short intervals, two or three seconds at a time only, in order that the shock may act as a factor in stimulating contractions. Ice may be used for the same purpose by gently rubbing with it, or cold water may be dashed over the abdomen.

In case the uterus cannot be palpated through the abdominal wall, the hand must be introduced into the vagina and any clots removed as quickly as possible. The hand may be placed within the uterus itself and its walls scratched with the fingers, being kept in until forced out by the uterine contractions. A small piece of ice may be carried in with the hand, but if so it must be quickly removed.

Having rapidly tried the foregoing methods without result we must endeavor to secure effectual contractions by the introduction of substances which act upon the uterus locally, as irritants. The substances are forcibly thrown in by means of a Davidson syringe, which it is well to have provided with a return-flow tube in order that the cavity of the uterus may not be distended.

Water, as hot as can be borne by the hand (about 120° F.), should first be tried, as this, in addition to being an excellent styptic, causes contraction of the uterine walls and blood-vessels, and also prevents abstraction of heat from the patient, who is already more or less cold and exhausted. This may be followed in case of failure by vinegar or iodin.

The iodin to be used should be the compound tincture made in accordance with the formula of Dr. Churchill, as this is the best preparation for use in an emergency. A sufficient quantity is added to water to produce a dark amber color, and the injection made as before. It rarely fails to control the most frightful hemorrhage. In favorable cases when proper agents are not at hand a temporary cessation of the flow may be secured by compression of the abdominal aorta.

A faradic battery, if at hand, may be employed to stimulate contractions, by placing one electrode in the uterus and the other over the fundus upon the abdomen.

When necessary to resort to packing of the uterus, strips of iodoform gauze should be used, sufficient to tightly fill the cavity of the organ up to the fundus, the walls of the uterus being squeezed down upon it. This is removed after twenty-four hours and a hot antiseptic douche given.

Monsel's solution should rarely be employed as a styptic, as the clot produced is removed with difficulty, and, being a foreign body in the uterus, may be a cause of secondary hemorrhage or a nidus for septic processes. It can usually be relied upon to stop the flow but should be reserved until all other methods have failed.

Having succeeded by means of some of the foregoing measures in securing a stoppage of the flow, a firm binder should be applied and the patient's condition carefully considered. The depression following an excessive loss of blood will be considerable and its effects upon the circulatory and nervous systems will be immediately manifested. The skin is cold and clammy, and there is distress, restlessness, small, frequent pulse, rapid respirations, and possibly fainting or convulsions due to the effects of the anemia upon the brain-centers.

The treatment of this stage is most important. The patient's head should be lowered and the foot of the bed raised; hot applications should be made to the extremities and warm compresses to the head. The circulation must be stimulated by the hypodermic use of cardiac stimulants, of which ether is probably the most rapid in its action, which may be followed by alcohol in some form or strychnin. If syncope threatens the limbs should be elevated and a tourniquet applied over the femoral artery, or a Martin's rubber bandage, including the entire lower extremity, may be employed in order that the blood may be confined as much as possible in the upper part of the body. The hypodermic use of morphin or laudanum, as a cerebral congestant, is also advisable.

If these measures fail to improve the pulse, warm coffee may be thrown into the rectum in small quantities frequently repeated, with brandy or whisky, if desired, as small quantities of fluids are rapidly absorbed from the rectum under these circumstances. Transfusion may be employed, or, what is usually more practicable, the intravenous or intracellular injection of salt solution, which, by increasing its bulk, tends to improve the condition

of the circulation. The solution must be sterile, at about the temperature of the body, and should contain 3 i of sodium chlorid to Oi of water. About half an hour is necessarily consumed in introducing the solution by means of a small trocar, rubber tube, and funnel, all of which have been previously sterilized. An ordinary large-size hypodermic syringe may be used, but necessitates a great many punctures.

When the circulation has been restored the patient must be nourished by the administration of small quantities of hot fluids by mouth, repeated at frequent intervals. Brandy and water may be first used, and gradually milk and broth may be added, and the quantities gradually increased. Great care is necessary in order to avoid nausea.

Headache, restlessness, and pain, when present, must be controlled by the administration of opiates, and the thirst, which is usually present, relieved by giving the patient ice and water in the intervals of feeding.

TENDENCIES IN MEDICINE.

By J. S. TRIPLETT, M.D.,
OF HARRISONVILLE, MO.

IN discussing the tendencies of medicine of to-day, it seems that the question which stands out most prominently and the one which is receiving the most consideration from investigators is the etiologic factor in the production of disease; and since an overwhelming majority of diseases are due either directly or indirectly to micro-organisms, the subject resolves into a study of these minute bodies; or, in other words, a study of bacteriology. I do not wish to convey the idea that progress has been delayed in other departments of medicine, but I do wish to emphasize the fact that researches in other departments of medicine have been, for the most part, greatly facilitated by the application of the principles of bacteriology.

It has been remarked that "no other man of our time has been such an epoch-maker in the history of surgery as Lister." This is certainly true, but it was only through the application of those principles which have for their object the perfect cleanliness of wounds, that the approbrium of surgery has, in a large measure, been removed. A careful reading of Lister's masterly address before the London Congress of Medicine one year ago, will impress one with the fact that aside from the remarks on anesthesia and the Röntgen-ray, the subject matter relates almost entirely to questions which belong to the domain of bacteriology. He tells in a plain and characteristic style of the process by which he was enabled to place surgery upon the scientific basis it now occupies; and, now, the entire medical profession stands debtor to the painstaking labors of this great man.

However skilful the surgeon may be, or perfect his technic, the entrance of pathogenic bacteria into the wound often frustates the object of the operation and menaces the life of the patient. Concerning this point Lister says: "Nothing was formerly more striking in surgical experience than the difference in the behavior of injuries according to whether the skin was implicated or not. Thus, if the bones of the leg were broken and the skin remained intact, the surgeon applied the necessary apparatus without any other anxiety than that of maintaining a good position of the fragments, although the internal injury to the bones and soft parts might be very severe. If, on the other hand, a wound was present communicating with the broken bones, although the danger might be in other respects comparatively slight, the compound fracture, as it was termed, was one of the most dangerous accidents that could happen. What was the cause of this astonishing difference? It was clearly in some way due to the exposure of the injured parts to the external world. One obvious effect of such exposure was indicated by the odor of the discharge, which showed that the blood in the wound had undergone putrefactive change by which the bland nutrient liquid had been converted into highly irritating and poisonous substances. I have seen a man with a compound fracture of the leg die within two days of the accident, as plainly poisoned by the products of putrefaction as if he had taken a fatal dose of some potent toxic drug. These and many other considerations had long impressed me with the greatness of the evil of putrefaction in surgery. I had done my best to mitigate it by scrupulous ordinary cleanliness and the use of various deodorant lotions. But to prevent it altogether appeared hopeless while we believed with Liebig that its primary cause was the atmospheric oxygen. But when Pasteur had shown that putrefaction was a fermentation caused by the growth of microbes, and that these could not arise *de novo* in the decomposable substance, the problem assumed a more hopeful aspect. If the wound could be treated with some substance which without doing too serious mischief to the human tissue would kill the microbes already contained in it, and prevent the access of others in the living state, putrefaction might be prevented however freely the air with its oxygen might enter."

Thus, was put into operation a method which has so revolutionized the practice of surgery that every region of the body is now explored with impunity; and the dread of former unsatisfactory results and fatal terminations has been reduced to an insignificant minimum.

So universal is the prevalence of bacteria in nature, so absolutely indispensible are they to our well-being (saprophytic), so inseparable are they from disease (pathogenic), that the study and recognition of the science of bacteriology becomes our imperative duty. DaCosta sounds the keynote of modern tendencies when he says:[1] "Now, the recognition of minute organisms, their study, their artificial culture and modes of growth, their secretions, their chemic character, their likes, their antagonisms, have let us into the secrets of another world, and are showing us the way in which infective maladies originate, and the laws they obey. We are looking for infection in every disease; we are often keenly pursuing it where it probably does not exist, at all events, not in the shape of bacteria, which in our day we accept as a term almost synonymous with infection."

Inasmuch as the subject of bacteriology is only in its developmental stage (its systematic study does not exceed a decade and a half) the data cannot be obtained whereby we are enabled to state the proportion of deaths or the number of cases of disease of parasitic origin, as compared to the whole number of deaths and the whole number of cases of sickness. Moreover, we must take into consideration the fact that diseases the etiology of which has hitherto been obscure and unsettled are constantly being added to the infective list.

In illustration of the first part of the above paragraph a brief consideration of cancer is apropos. As yet its specific cause is not established; still many eminent men believe it to be of parasitic origin, and have observed an organism upon which they base their belief. On the other hand it has *not* been proven to be of non-parasitic origin. When an organ becomes the seat of carcinoma, distant organs and parts will in time become similarly involved (inoculated?), and again, quite a number of inoperable cases have been successfully treated with antistreptococcic and other serums, both of which facts argue for a parasitic origin. And, in regard to the latter part of the paragraph referred to, we do not have to search far to prove its correctness. Perhaps the disease the specific cause of which has been most recently discovered is yellow fever. Thus, as research continues and our knowledge of disease widens, the percentage of infectious maladies is ever higher and higher.

I might state here, as a matter of statistic importance, that Robert Koch in 1881 at the London Congress of Medicine, showed the bacterium which is responsible for more deaths among mankind than any other known disease. The tubercle bacillus causes one-seventh of all deaths, and Vaughan states after a careful investigation, that one-third of all men are affected with tuberculosis at some period of their existence.

Let us now inquire what relation bacteria bear to animal and vegetable life and what rôle they play in Nature.

Unlike the higher order of vegetable plants, bacteria are devoid of chlorophyl and are forced to obtain their nutritive materials from organic matters as such, and, therefore, lead either a saprophytic or parasitic existence. Their life processes are so rapid and energetic that they result in the most profound alterations in the structure and composition of the materials in and upon which they are developing. Decomposition, putrefaction, and fermentation result from the activities of the saprophytic bacteria, while the changes brought about in the tissues of their host by the parasitic forms find expression in disease processes and not infrequently in death.

The rôle played in Nature by the saprophytic bacteria is a very important one. Through their presence the highly complicated tissues of dead animals and vegetables are resolved into simpler compounds, carbonic acid, water, and ammonia, in which form they may be taken up and appropriated as nutrition by the more highly organized members of the vegetable kingdom.

The chlorophyl plants do not possess the power of obtaining their carbon and nitrogen from such highly organized and complicated substances as serve for the nutrition of bacteria, and as the production of these simpler compounds by the animal world is not sufficient to meet the demands of the chlorophyl plants, the importance of the part played by the bacteria in making up this deficit cannot be overestimated. Were it not for the activity of these microscopic living particles, all life upon the surface of the earth would undoubted cease. Deprive higher vegetation of the carbon and nitrogen supplied to it as a result of bacterial activity and its development comes rapidly to an end; rob the animal kingdom of the food-stuffs supplied to it by the vegetable world, and life is no longer possible. It is plain, therefore, that the saprophytes which represent the large majority of all bacteria, must be looked upon by us in the light of benefactors, without which existence would be impossible. With the parasites, on the other hand, the conditions are far from analogous. Through their activities there is constantly a loss, rather than a gain, to both the animal and vegetable kingdoms.

Their host must always be a living body in which exist conditions favorable to their development and from which they appropriate substances which are necessary to the health and life of the organisms to

[1] Medical News, vol. lxx.

which they may have found access; at the same time, they eliminate substances as products of their nutrition which are directly poisonous to the tissues in which they are growing.

When the pathogenic bacteria gain admittance to the body and there find conditions favorable to their growth, they produce alterations which we call disease and which we further specify by saying it is an infectious disease. Quite often, however, persons are exposed to contagion and escape infection; *i.e.*, they are not susceptible to that particular form of infection. How shall we explain this? After the bacteria have gained admittance one or two results follows: The invading organisms will multiply and by their poisonous products—toxins—produce death, or the protecting substances of the tissues—the alexins—will inhibit or neutralize the action of the toxins, and health will be resumed. In the latter mode of termination, when there is a failure to establish a condition of disease, the tissues are victorious and are said to be resistant or to possess immunity.

Immunity may be natural or acquired. Natural immunity may be peculiar to the individual, species, or race. Acquired immunity is observed in individuals (for some time at least) who have recovered from certain forms of infection, and have thereby acquired protection against subsequent similar attacks.

The most generally accepted explanation of acquired immunity, and the one worthy of the greatest confidence, assumes immunity to be due to reactive changes on the part of the tissues, which result in the formation in the tissues of antitoxic substances capable of neutralizing the poisons produced by the bacteria against which the animal has been immunized; and not as Metchnikoff would have us believe, due to phagocytosis, the principle of which is that the wandering cells of the animal organism, the leucocytes, possess the property of taking up, rendering inert, and digesting micro-organisms with which they may come in contact in the tissues.

A vast amount of research and experimentation has been required to place acquired immunity upon a working basis, but it has lead to the greatest triumph that has ever been witnessed in the history of medicine, *viz.*, the establishment of a therapeutic system founded upon Nature's own process of protecting the living organism against disease.

Let us notice a few of the diseases which are being treated by this process: Of these we are perhaps more familiar with *diphtheria* than with any other. The use of the serum treatment has been so general in this affection and its results so convincing that we are forced to accept it as the best known method of to-day. The serum treatment of diphtheria has reduced the mortality more than one-half as compared with other modes of treatment.

Tetanus.—Not being of such frequent occurrence as diphtheria, the treatment of tetanus by its antitoxin has not had the extended trial which has favored the antitoxin of the former affection, but we are safe in saying that better results have been obtained with this treatment than with other methods.

Bubonic Plague (Malignant Polyadenitis).—Yersin has so conclusively demonstrated the efficacy of the serum treatment of this infectious disease in India that he has begun the manfacture of the serum on a large scale. He is developing the antitoxin as rapidly as possible, for use not only as a specific against the disease, but also as a prophylactic. (Item, MEDICAL NEWS, January 30, 1897.)

Yellow Fever.—There seems to be no doubt that Sanarelli has discovered the bacillus of yellow fever. He prepared a serum-antitoxin and the results of his treatment are pronounced definitely convincing. (Item, MEDICAL NEWS, March 13, 1897.)

Tuberculosis.—When Koch's tuberculin treatment became known, the news was heralded through the world that a cure had at last been found for consumption; enthusiasm ran high, and an impatient populace was led to believe that in a short period of time the greatest enemy of mankind would be forever subdued. In justice to Koch we must say that rumor was far in advance of his most sanguine expectations. Koch's tuberculin has been, and is now of incalculable value in the diagnosis of bovine tuberculosis, thereby furnishing the means of stopping one important source of infection. The reaction following injections of tuberculin into tuberculous cows is so marked that it is our best means of diagnosis; and were this its only use, it must be accorded a high place.

However, our investigators are not yet through with the tubercle bacillus, and a successful method of combating tuberculosis is only one of the unsolved problems.

Pyogenic Infection.—In phlegmonous inflammations, spreading suppuration, puerperal infection, and septicemias in general of streptococcic origin, the antistreptococcic serum has been used with such satisfactory results as to merit its continued employment.

Other Miscellaneous Diseases.—Among other diseases which have been treated by antitoxic serums with varied success may be mentioned typhoid fever, leprosy, syphilis, Asiatic cholera, hydrophobia, pneumonia, erysipelas, anthrax, and many others.

From a review of the facts which have been set forth, are we not justified in claiming that more has been accomplished through the study of bacteriology,

concerning the cause, nature, prevention, and cure of disease, than through the study of any other department of medicine, and are we not looking for the solution of most of the important questions in the study of bacteriology? Clearly the present tendency in medicine is in this direction.

WATER IN THE TREATMENT OF GASTRO-INTESTINAL DISORDERS.

By JOHN A. LICHTY, M.D.,
of Clifton Springs, N. Y.

In recent years the advocates of hydrotherapy have been receiving more attention and respect than formerly. Men acquainted with physiologic principles and able to judge as to the therapeutic value of a remedy have succeeded in establishing it upon a more rational basis. The Brand treatment in typhoid fever is no longer an experiment, and the pack in pneumonia is admitted to be a great aid to any internal medication which it may seem wise to employ. The principles which the empiric Priessnitz blindly followed in the early part of this century, have thus, through the experiences of physicians, been revealed in the various treatments of diseased processes. To-day, the text-book upon therapeutics which does not recognize water as a remedial agent and specify the mode of its application is not considered complete.

The famous Hoffman, a contemporary of Boerhaave, in writing upon the subject of water said: "If there exists anything in the world that can be called a panacea, a universal remedy, it is pure water; first, because it will disagree with no one; secondly, because it is the best preservative against disease; thirdly, because it will cure agues and chronic complaints; fourthly, because it responds to all indications."

But water is not a panacea, and those who have not kept this in mind when speaking of its efficacy in the treatment of disease are in the main responsible for the general disfavor into which hydrotherapy has so often fallen. Therefore, in writing upon the subject of water in the treatment of gastro-intestinal disorders, I approach it with care and candor, very ready to admit that it is not a cure-all, and to recognize the many other valuable remedies which are usually employed in the treatment of such affections, but with a growing consciousness that water is not as generally employed as it should be, and when employed, it is often in the most careless and haphazard way.

When a glass of water is ingested it probably has no other effect upon the mouth and esophagus than that of cooling, moistening, and cleansing them. From the interesting investigations of Von Mehring we learn that water is absorbed only in very small quantities from the stomach. At least nine-tenths of all the water taken into the stomach is passed into the duodenum. A glass of water will probably reach the duodenum within thirty minutes after being swallowed. If it is taken later than half an hour before a meal, a quantity will remain in the stomach to dilute the food and the gastric juice. This does not interfere with gastric digestion, since a glass of cold water taken during a meal does not disturb healthy digestion.[1] A greater amount than this, and especially if taken soon after a meal when the stomach is in the height of digestive activity, interferes with digestion. It is therefore best not to drink more than one glass of water half an hour before meals, one glass of cool water during meals, and to leave digestion undisturbed by water from one to two hours after meals, depending upon the known digestibility of the food taken.

After the water has passed into the small intestine it is absorbed. It has been found by experiments upon dogs that when a quantity of water is injected into the bowel the stream of chyle in the thoracic duct is but slightly if at all increased, thus showing that the water is absorbed by the blood capillaries of the intestinal villus, and not by the lacteal. It is therefore beyond dispute that water in the bowel is taken up directly by the rootlets of the portal vein, and must traverse the liver before it can reach the general circulation.

Not all the water, however, passes into the circulation, for some is held by the feces, which usually contain at least seventy-five per cent. of water. According to Landois and Sterling, the quantity of water taken has no direct effect upon the amount of water in the feces. Indirectly, however, it without doubt has some effect upon the feces; namely, that in a person who for some time takes a restricted amount of water, the feces will be dryer and harder than when water is freely ingested. I base my assertion upon the following facts, physiologic and clinical:

I have already shown that the water absorbed from the bowel must pass through the liver before it can reach the circulation. It is a well-known fact that this increase in portal circulation greatly augments the secretion of bile. (Reichert, unpublished lecture.) One of the main functions of the bile is to increase peristalsis; thus, it is called a "peristaltic persuader." Landois and Sterling admit that the more energetic the peristalsis the more watery are the feces. There can be no doubt then that increased ingestion of water will cause an increase of the water in the feces. I have always found in patients suffering from constipation that increased ingestion of water is followed by softer stools. This

[1] "Landois and Sterling's Physiology," p. 305.

principle, as I shall show later, in uncomplicated cases of constipation has frequently directed my treatment.

Pure water, when applied to an irritated mucous membrane, has a very soothing and quieting effect; in fact, it affects all tissue in this way. When an injury is sustained, usually the first impulse is to bathe the injured surface with water. It was this instinct which first led to the recognition of the therapeutic value of water.

The following facts, referring to the elimination of water, I base upon experiments upon myself and observations upon patients: When pure water is taken in large quantities (ten or twelve tumblerfuls, or eighty ounces a day) it produces a decided and constant effect upon the activity of the eliminating organs of the body. During the first few days the kidneys become very active, a large amount of urine is passed, which is pale and of low specific gravity, and the relation between urea and uric acid is very much disturbed, considering their usual relation to be one part uric acid to thirty-three of urea (Haig); during this disturbance I frequently find the proportion to be one to fifty-five—the uric acid being diminished about one-half, and the urea only slightly lessened. If the ingestion of this amount of water is continued a week or two, the excessive activity of the kidneys seems to diminish; the amount of urine passed in twenty-four hours is perhaps sixty instead of eighty ounces; it has a specific gravity of 1012, instead of 1006 or 1008; the uric acid remains diminished, while the urea is much increased, the proportion being, perhaps, one to seventy. For the first few days the specific gravity of the blood, if in the beginning it is above normal, remains the same, but it soon gradually diminishes to the normal. As the amount of urine lessens the feces seem to be more moist, and the bowels, if constipated, are inclined to become regular.

I have not followed out any clinical investigation showing the action of water upon the skin and respiratory tract.

In the treatment of diseases of the gastro-intestinal tract, I have learned that water must be employed according to the condition which is found, and that as much care must be exercised in prescribing it as in advising the employment of any other remedy. In acute gastritis small pieces of cracked ice are often all the stomach will endure. As the irritation subsides, frequently repeated drafts of water are tolerated, and finally liquid foods. The use of drugs is indicated in probably but one-fourth of the cases.

There is a peculiar idea among the laity, and I believe it is also cherished by some physicians, that as soon as any portion of the alimentary canal is affected by an abnormal condition attention must be turned, first and principally, toward dietetics, and that a successful issue of the case will largely depend upon how much the patient can be made to eat. This course is pursued unmindful of the fact that a human being can comfortably live several days without food, and that rest of function is of prime importance in treating any organ.

In chronic gastritis one of the chief difficulties to overcome is the accumulation of mucus in the stomach, as well as the chemic and mechanical irritation due to the presence of undigested food. Water, either in the form of lavage or in copious drafts, is the best remedy to overcome this difficulty. Lavage is the treatment, *par excellence*, but it is not always practicable, nor is it always necessary. I have found that drafts of water at the proper time and in proper quartity will wash out the stomach quite as satisfactorily as lavage, unless there be decided atony of the stomach or pyloric stenosis. In chronic gastritis there is usually a symptom-complex plainly showing that the patient has unconsciously or deliberately denied himself the proper daily amount of water. There is a urine of high specific gravity; blood not sufficiently diluted; a coated tongue, constipation, etc. These condition must be met, and the copious drafts of water which are taken to cleanse the stomach can be further used to flush the body.

Writers almost unanimously agree that in dilation of the stomach water should be sparingly used. Hemmeter says: "Not more than one and one-half quarts a day, including all drinks, coffee, soups, etc.[1] In these conditions water can be given in small quantities frequently repeated.

There are patients with dilated stomachs who are very much below the normal in weight. The loss of weight seems to be mostly due to the absence of the normal amount of fat about the abdomen. The condition is frequently associated with floating kidney and its sequelæ. Analysis of the stomach contents shows the gastric juice inert and not able to dispose of solid food to advantage. These patients do not gain in weight when placed upon a dry diet, and yet a decided gain in weight is essential to recovery. It is therefore frequently necessary to disregard the idea that fluids in large quantity will relax the stomach, and to prescribe a milk and raw egg diet. As the patient approaches the normal weight (and sometimes not until he is far above it) the diet can be gradually changed to solid food. I have found that a liquid diet taken while the patient is in bed will not have the same tendency to increase the dilation of the stomach as when the patient is up and about,

[1] Hemmeter, "Diseases of the Stomach," p. 593.

and that the stomach, especially in atonic dilation, will frequently contract as the patient accumulates fat about the abdomen.

In hyperchlorhydria, there is frequently a disturbance of the motor action of the stomach. A large quantity of water taken at any one time will usually aggravate this condition, and yet, water is very necessary in these cases as it keeps the highly acid contents of the stomach diluted and thus less irritating to the gastric mucous membrane Under these circumstances it is best to prescribe it in small quantities, frequently repeated.

There is no condition of the bowels which yields more happily to the use of water than chronic constipation. The causes of constipation are numerous and no treatment will permanently succeed which does not meet the cause. I have no doubt that in many instances the only cause of constipation lies in the ingestion of an insufficient quantity of water, and that in many more cases, whatever other cause may be found, it is secondary to, and induced by, a lack of water in the system.

I have already referred to the fact that the amount of water in the feces and the peristaltic action of the bowels depend, if not primarily, at least secondarily, upon the amount of water ingested. Clinically, my experience certainly accords with this. Patients suffering with constipation seem to have a sort of "hydrophobia." They will avoid water, and take all sorts of medicinal laxatives instead. These drugs, which act in the main by attracting water to the bowels, draw from the system some of the fluid necessary to the proper performance of the functions of the various organs and tissues. Under these circumstances the patient loses in weight, and the tissues become dry and more susceptible to disease. I could give clinical histories of numerous patients who have shown such unfavorable developments, and who have been permanently relieved by inducing them to drink sufficient water. I will, however, refer to only one:

Mr. E. L., aged fifty-three years, a manufacturer, consulted me first, January 9, 1897. He presented a history of constipation of twenty-years' standing. He had always taken medicine to make the bowels move; recently had taken aloin, strychnin, and belladonna tablets in ascending doses. He had a good appetite, and sometimes had distress in the abdomen about three hours after eating. One year previously he had had an anal fistula. He always ate rapidly.

Examination showed his weight to be 136 pounds, which was below the normal; conjunctivæ yellow; tongue coated; teeth poor, and breath fetid. This man was in the habit of drinking very little water.

I prescribed a diet of coarse food, such as cereals, green vegetables, and meat in small quantity. I also prescribed ten or twelve glasses of water to be taken daily at regular intervals. Within a few days the patient's bowels moved regularly, and have continued to do so ever since.

Not all cases will yield as easily as did this one, and other means must be employed, but in all cases, whatever system of treatment is adopted, the use of large quantities of water will be a great aid to the remedies and diets prescribed. Water is frequently used in constipation in the form of an enema. The "Hall treatment" some years ago became almost a household word. Too much cannot be said against the indiscriminate use of enemas. When an acute condition is to be met the enema may be employed, but in chronic constipation, while it may give the patient a feeling of immediate relief, it rarely if ever cures. On the other hand, it sometimes does great harm. The warm water produces a dilation and consequent inactivity of the lower bowel, and in women, a relaxed condition of the pelvic tissue as well as displacement of the pelvic organs.

Water used in this way cannot produce the same results as when taken by the mouth. It acts simply mechanically, and does not have the same physiologic effect as when ingested. It is sometimes a very difficult matter to persuade the habitué of the syringe to discontinue its use, but in all cases of chronic constipation it must be discarded if permanent relief is desired.

Water is a valuable aid in the treatment of the various forms of diarrhea and dysentery. When these conditions arise, the bowel makes an effort to free itself of an irritating material. After this has been thrown off peristaltic action continues because of the irritated and congested mucous membrane. Water in the form of an enema will frequently at once relieve the bowels, and should always be employed before a sedative or astringent medicine is administered. If the patient is strong and robust, cold water should be employed; if, on the other hand, he is weak or in a state of collapse, warm water is more desirable. The amount to be injected must somewhat depend upon the endurance of the patient; if the bowel is not too sensitive, from one and a half to two quarts should be slowly injected. If the distention of the bowels causes pain, it is well to insert a rectal tube, and inject small quantities of water at short intervals.

In dysentery nothing can be used which will give more general satisfaction then enemas of plain, cold water. They are grateful to the patient, do not produce nausea, and very largely relieve the tenesmus from the first. A noted physician has said of this treatment: "It changes a huge internal, into an external abscess, and enables us to cleanse the bowels of their putrid contents."

In cholora infantum and acute enterocolitis, irrigation of the bowels with pure water is of such importance that, aside from proper dietetics, all other methods of treatment fall into insignificance. It is the most rational, and, I think, the most successful treatment which can be employed. It is very easily instituted. The nurse should be instructed to put on a rubber apron, and to take the child in her lap, laying it upon its abdomen. The lower end of the apron should be placed in a suitable receptacle to receive the wash water and excrement. The nozzle of a fountain syringe is then inserted in the child's anus, and the water allowed to flow continuously under slight pressure. Experiment has shown that there is no danger of rupturing the bowel, since the rectum in a child will expel the water after a certain pressure is attained. The child after two or three treatments of this kind will, in nearly every instance, be relieved.

Much has been written concerning auto-intoxication and its symptoms. Some conditions, such as epilepsy, melancholia, and neurasthenia, which have heretofore been obscure as to their etiology, are now referred rather to the absorption of toxic agents due to imperfectly digested foods; to the retention, or accumulation of normally produced materials that should be further elaborated and changed, and to the production of abnormal substances in the body. Physiologic and chemic research in this direction has been greatly stimulated, but not all which at first was hoped for has been demonstrated. The terms neurasthenia, melancholia, and not infrequently hysteria, have been made to include conditions which were entirely and only intestinal auto-intoxication. So eagerly has this idea been taken up by clinicians that there is now danger of referring all the functional neuroses, etiologically, to intestinal auto-intoxication.

In the treatment of intestinal auto-intoxication, water, taken in large quantities, is of great service. It especially accomplishes good results by aiding elimination. In this condition, the necessity of drinking a large amount of water to act freely upon the eliminating organs can well be compared to the necessity of using water for flushing out a general sewer system in a large city.

Such, in brief, are the indications for the employment of water in the treatment of gastro-intestinal disorders. Its use does not exclude the employment of any other rational therapeusis, on the other hand, it is a great aid to other remedial agents which may be indicated.

Gray's Anatomy in Chinese.—The president of the Medical Missionary Association of China, Dr. H. T. Witney, is translating "Gray's Anatomy" into Chinese.

HOSPITAL REPORT.

A CONTRIBUTION TO THE STUDY OF THE FLAGELLATE FORMS OF THE TERTIAN MALARIAL PARASITE.[1]

By FRED P. SOLLEY, M.D.,
OF NEW YORK.

DURING the six months from May to November, 1897, a systematic study was made at the Presbyterian Hospital of the organisms occurring in the blood of eighty-seven patients suffering from malarial fever. The results of these observations, with an analysis of the cases, have been embodied in an article to appear shortly in the annual report of the hospital.

The interest attaching to certain of these observations, in view of very recent additions to our knowledge of the much-discussed flagellate bodies, prompted the publication of this excerpt.

The following are descriptions of three examples of flagellated forms of the parasite occurring in a case of tertian malarial fever:

1. The first form of the parasite to be observed was a pigmented extracellular body, ovoid in shape, at either pole of which was attached a rapidly vibrating flagellum. The movements of these appendages were so active that the pigment granules in the body were apparently shaken into a single crowded mass which lay almost motionless near one end of the ovoid. Later on, when the vibration of the flagella became slower so that their wavy outline could be seen, the pigment became more scattered and resumed the usual lively dancing motion. The flagella were finally withdrawn into the substance of the body, the latter expanding appreciably as it absorbed them. The pigment, still collected at one end of the body, continued its active vibratory motion as long as the organism was watched.

2. In the second form no flagellum was at first seen, but attention was attracted by a markedly rapid vibration exhibited by a group of the pigment granules at one side of the body, as if they were being violently shaken to and fro. The pigment in other parts of the body merely showed the ordinary dancing motion. This extremely rapid vibration was seen to become all at once much slower, then to almost cease, while a number of the pigment granules flowed out of the body into a single rather broad flagellum, revealing for the first time its presence and outline. After a few seconds the rapid vibration of the flagellum, and with it the violent to and fro movement of the pigment at that side of the body, again began. Except for one or two granules which remained caught here and there, the pigment which had entered the flagellum was now shaken back into the body. The flagellum itself, grown long and narrow, vibrated so rapidly that its outline could no longer be made out, and the pigment lodged in it showed only as one or two dark blurs. These intermittent vibrations continued some time, finally becoming slower and less frequent, the flagellum at the same time growing shorter, until ulti-

[1] An extract from the forthcoming Annual Report of the Presbyterian Hospital for 1897–8.

mately it was absorbed into the body. The pigment granules at the spot where the flagellum was absorbed continued to exhibit intermittent vibratory spasms some time longer. Finally, these ceased also, and the organism then appeared as an ordinary extracellular form with slowly dancing pigment. A clear nuclear space persisted near the center of this body through all these changes.

3. In the third flagellate form the presence of a flagellum was suspected on account of a peculiar intermittent oscillation among all the pigment granules at once. A disturbance among the surrounding red-cells was next noticed, and a long, slender flagellum was seen in active motion at that situation. A small bulbous projection was now observed protruding from the body near this flagellum. This protuberance gradually elongated, being at first straight, but beginning to bend as it still grew longer, then waving from side to side more and more rapidly.

It still slowly lengthened until it was about twice as long as the diameter of the body. Here it remained stationary a few moments, both flagella being now in extremely active continuous motion. A red-cell floating between them was actually whipped until it rotated like a top.

The vibratory motion of both flagella then became slower, allowing their snake-like undulations to be plainly seen. At this time both flagella began to grow longer, finally reaching a length of about four times the diameter of a red-cell. As they increased in length the body appreciably diminished in size, their growth being evidently at the expense of the protoplasm in the organism. Both flagella now became detached from the body, and during some seconds were seen actively wriggling about among the red-cells. They finally slid over the boundary of the field and were lost to view. The attenuated body remained as a small extracellular form with its slowly moving pigment granules crowded closely together. The nuclear clear space, which had been present at first, disappeared when the flagella broke away.

Since these observations were recorded an important advance has been made in our knowledge of the nature of the flagellate bodies. MacCullum of Baltimore published in the *Lancet* for November 13, 1897, and in the *Johns Hopkins Hospital Bulletin* for November, 1897, an account of the flagellate forms of a hematozoan occurring in crows, the Halteridium of Labbe.

The following is a brief summary of his description:

In the blood of these birds, full-grown forms of the parasite which have been extruded from the corpuscles are found in two distinct varieties. The protoplasm in one of these forms is granular, and readily stains with methylene-blue; in the other it is hyaline, and does not take this stain. The latter bodies frequently develop flagella; the former never do. The flagella when developed break away from the hyaline bodies and swarm about the nearest granular form, beating against its sides in an evident attempt to enter it. A single one of these flagella succeeds in inserting its rounded extremity or "head" into the body, and finally wriggles its way inside, churning up the contained pigment for a while after being absorbed. After fifteen to twenty-five minutes the granular form thus entered assumes an ovoid shape, the pigment being collected at one end in a small spheric appendage, while the opposite end is hyaline, and presents a conical process. This fusiform body is provided with a refractive nuclear area, and possesses remarkable power of locomotion. This is the body described by Danilewsky as a "vermiculus" ("Parasitologie Comparée du Sang," 1889). It moves about in the blood with great activity, puncturing the red-cells with its conical end, and sometimes dashing through a leucocyte, tearing it open and scattering its granules in the plasma.

The above changes, therefore, represent "a sexual process with a resulting motile form, occurring under unfavorable circumstances, analogous to similar processes in plants and lower animals. The vermiculus has power of penetration by means of its pointed anterior end, and may thus escape through the intestinal wall."

In the blood from a case of estivo-autumnal fever, MacCulium has seen this same sexual process, the flagella breaking away from the parent body and beating against a quiet extracellular organism in which the pigment was arranged in a ring. One flagellum finally plunged its head into this body, and was soon afterward absorbed, stirring up the pigment for some time after its entrance. No motile "vermiculus," however, resulted from this conjugation.

In the light of this discovery the three flagellate forms of the tertian parasite described above take on a new meaning. Let us briefly reconsider their salient features with the idea of the "vermiculus" in view.

1. The first was a fusiform body, into which, after a period of intense vibratory activity, *two* flagella entered instead of the single one observed to gain admission in the case of the Halteridium and the estivo-autumnal parasite. The final appearance presented by this body suggests the "vermiculus," the pigment, although more scattered than at first, being still collected at one end. The fact that the pigment was crowded into an almost motionless mass at the time when the flagella were vibrating most actively, would seem to indicate that the origin of the motion exhibited by this form was not in the body itself, but in the flagella.

2. In the second flagellate body it is still more strikingly suggested that the flagellum had become affixed to the body from without. Here the pigment showed violent commotion only at the point of attachment of the flagellum, the granules in the rest of the body being comparatively quiet. This single flagellum finally entered the body after a series of rhythmic vibratory movements which might well be purposeful. The pigment, at the spot where the flagellum was absorbed, was churned up for some time after the entrance of the flagellum. This body, moreover, presented throughout these changes the nuclear space found in the "vermiculus."

It is believed, therefore, that these two forms represent the first stage in the development of "vermiculi" after the attachment of the free flagella.

3. In the third flagellate body we are evidently dealing with a wholly different phenomenon. Here the rapid vi-

bratory motion simultaneously occurred in all the pigment granules and in the flagellum, indicating that the source of this motion was in the body itself. Moreover, a second flagellum was actually seen to develop from the substance of the body. Both flagella visibly grew in length at the expense of the body's protoplasm, and finally broke away, moving actively about as free forms in the field. The nuclear space present up to this time was obliterated in the shrunken remnant by invading pigment. This form, then, produced the free flagella designed to fertilize certain receptive extracellular bodies by the process observed in the first two forms.

In these forms, therefore, is represented an attempt on the part of the parasite to create a resistant body, the motile "vermiculus" apparently designed to escape from an unfavorable environment and perpetuate the existence of the organism elsewhere than in the blood. In this connection it is interesting to note the conditions obtaining in the patient whose blood furnished these specimens. In this case was presented a history of quotidian paroxysms, but after admission to the hospital showed only a tertian intermittent fever. In the blood two distinct generations of organisms were found, maturing at different times, corresponding to the quotidian paroxysms before entrance. One of these groups of organisms, however, was evidently dying out, very few of its representatives being found in the blood. This generation of the parasite was therefore present in too small numbers to cause a febrile reaction, and it was at the time of maturity of this group that the second and third flagellate forms described were found. Moreover, the patient had had a single moderate dose of quinin on the day before these blood-examinations were made. Add to these conditions the fact that the blood had been some time out of the body when these forms were observed, and we have a sum total of "unfavorable circumstances" which might well lead the parasite to assume a more resistant form.

The same sexual process, then, resulting in the fully developed "vermiculus" in the case of the Halteridium in crows, and demonstrated by MacCullum as occurring in estivo-autumnal infections in human blood, is here indicated for the parasite of tertian malarial fever.

MEDICAL PROGRESS.

First Care of a Baby.—HANSON (*Cleveland Med. Gaz.*, February, 1898) is one of those who believe that the baby who is started right stands a much better chance to grow up well and strong than if allowed to catch cold or get indigestion within the first few hours of life. He insists upon the following simple rules as being all important: (1) Do not expose the baby after birth to a greater change of temperature than is absolutely necessary. (2) Do not allow attendants to subject him to prolonged exposure while washing, but rub him over with lard (this usually being convenient), and quickly wipe him off and wrap him up warmly. (3) Do not use too fine a thread in tying the cord, and dress the same with dry, sterile dressings. (4) Give nothing but tepid water or some very weak aromatic tea until there is sufficient milk in the mother's breast for the child's requirements. (5) Notice the clothing and see that the abdomen and chest are not constricted thereby.

A New Vaginal Tampon.—BEUTNER (*La Méd. Moderne*, January 19, 1898) calls the attention of physicians to a new tampon especially recommended for patients while traveling. In the center of a little sac of cotton, to which is attached a string, is placed a ball of cocoa-butter, etc., in which have been incorporated the desired remedies. The tampon is introduced by the patient in the morning and taken out at night. The heat of the body melts the cocoa-butter and the therapeutic agent saturates the cotton and comes in contact with the mucous membrane. The inventor proposes a variety of soothing, astringent, antiseptic, and resolving remedies which shall be put up in this manner for the use of travelers.

THERAPEUTIC NOTES.

Rheumatoid Arthritis Treated by Lycetol.—NORWOOD (*Med. Times and Register*, November 6, 1897) says that the most that can be hoped for in rheumatoid arthritis is an arrest of its progress for a longer or shorter time and relief of the pains in the affected articulations. Galvanism, massage, baths, and an invigorating diet have been found of more or less value, as well as the administration of cod-liver oil, ferruginous preparations, and the iodids. A comparatively new remedy which seems to have a promising future before it in the treatment of this disease is lycetol. One of its distinct advantages is that, owing to its pleasant taste and freedom from irritating effects, its administration can be continued a long time. In two cases recently treated by Norwood the results were encouraging.

Lactophosphate of Lime for Acne and Furunculosis.—PURDON (*Dublin Jour. of Med. Sci.*, February, 1898) has been most successful with the treatment of acne and furunculosis with the syrup of the lactophosphate of lime. He regards it as "an agent of nutrition, and thinks it is appropriately given in the conditions above referred to, as they are "evidences of depraved nutrition." Be that as it may, the administration of this drug, coupled with the advice to the patient to wear Balbriggan linen undershirts, will prevent outbreaks of acne which occur from time to time on the shoulders and chest. If it is thought best to add cod-liver oil, the following prescription will be found palatable:

℞	Acaciæ	ʒ x
	Aquæ	℥ i
	Syr. calcis lacto-phosphat. . .	ʒ iii
	Ol. morrhuæ	ʒ iv
	Ol. amygd. amar. . . .	*m.* iii.

M. Rub the gum, water, and syrup together until a smooth mucilage is made, then gradually add the cod-liver oil, with constant stirring, and lastly, the essential oil of bitter almonds. Thus made, each tablespoonful of the cod-liver oil and syrup of the lactophosphate of lime contains 4 grains of lactophosphate of lime and fifty per cent. of cod-liver oil.

The Medical News.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

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Address the Editor: J. RIDDLE GOFFE, M.D.,
No. 111 Fifth Avenue (corner of 18th St.), New York.

Subscription Price, including postage in U. S. and Canada.

Per Annum in Advance	$4.00
Single Copies	.10
With The American Journal of the Medical Sciences, Per Annum	7.50

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in *registered* letters.

LEA BROTHERS & CO.,
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SATURDAY, APRIL 16, 1898.

ANOTHER DEAL AMONG THE MEDICAL SCHOOLS OF NEW YORK CITY.

Just one year ago to-day the medical circles and medical journals of New York were rejoicing in the gratifying spectacle of the abolition of the last remaining proprietary feature from the medical schools of New York and the consolidation of Bellevue and the University Medical School under the fostering care of the University of the City of New York. This was welcomed as marking the inauguration of a new and progressive epoch in the history of medical education in the Metropolis. The circumstances of the withdrawal of Bellevue from this combination, which occurred a month later, brought disappointment to the friends of medical education, but the latent financial resources which that institution promptly exhibited and the elimination of proprietorship from at least one of the two institutions under consideration, were consoling circumstances. On the whole it was believed that the agitation had at least accomplished good. Both institutions settled down to their individual work and dropped out of special public attention.

But the Faculty of the University Medical School is resourceful, to say the least, in the field of surprises, and rumors are rife that it has severed, or is about to sever, its connection with the University, and active negotiations are under way for its affiliation with Cornell University as the medical department of that institution.

The history of the circumstances which have led to this final break between the Medical School and the University is interesting as tending to determine where the responsibility lies for this overthrow of an enterprise which gave to the profession such promise of worthy achievement in medical education. To understand all the circumstances it is necessary to review somewhat the history of the medical school and its relation to the university prior to the recent negotiations.

In the Medical Department of the University of the City of New York there were originally two distinct corporations, *viz.:* the Medical College Laboratory Association, which was the original foundation of the institution, and, second, the Loomis Laboratory Association. The property of the former institution had an estimated value of $230,000, and that of the latter, $225,000. These two corporations were legally distinct, each having its own board of trustees. Both of these boards were composed of members of the medical faculty and laymen in about an equal proportion of each. The University, previous to the agreement for consolidation, which was entered into during the spring of 1897, had no equity in either corporation, nor did it contribute any money to the support or running expenses of either, with the exception of a trifling sum of $2000 or $3000, which was raised for the benefit of the medical department about fifty years ago. The relation of the medical school to the university proper was, therefore, only a nominal one; that is, the chancellor of the institution signed the diplomas and the commencements were held under the auspices of the university, but the practical affairs were managed entirely by the faculty. Appointments to professorships and minor positions in the faculty were made by that body itself, although it was customary to go through the formality of submitting such appointments to the approval of the council of the university.

An effort was being constantly made, however, by the university to absorb more and more into itself

the medical institution, and to this end about six years ago it seemed wise to the faculty to eliminate the feature of proprietorship from the school. The salaries of the various positions were fixed at a stated sum, and the university guaranteed the amount. With the intent of putting the medical department on a more substantial basis, and consolidating more firmly its relation to the larger institution so that it might become in fact as well as in name the medical department of the university, in the spring of 1897 an agreement was entered into by the Medical College Laboratory Association to transfer all of its property to the university and place the entire responsibility and management in the hands of the university council. As a part of the machinery for conducting the institution and as a guarantee to the faculty that its traditions, methods of instruction, and changes in its membership might be in the hands of those who were in immediate touch with it, it was agreed by both parties to the contract that a special medical committee of the council should be appointed to have these matters in charge. The inducement to the faculty to encourage its board of trustees to surrender the property was the expectation and assurance that under the fostering care of the university large sums of money could be procured to steadily advance the facilities for medical instruction and secure to the members of the faculty a degree of independence in the thoroughness of their instruction which would promote in every way the advancement of medical education. On these conditions, the property of the corporation known as the Medical College Laboratory Association, amounting to $230,000, was legally transferred to the university. Nothing was said about the property of the Loomis Laboratory Association, although it was expected by both parties to the contract that it sooner or later would follow in the wake of the older institution, and amalgamate with the university. Matters had reached this stage, and the success of the university council in accomplishing its aspirations of becoming a great university were steadily growing, when overtures were made to Bellevue Hospital Medical College to join with it, and together with the University Medical School establish a grand medical department.

To this proposition Bellevue acceded, and the execution of the agreement had proceeded to such an extent that the faculty composed of men from both of the schools was arranged and appointed. Here the misunderstanding began. The original faculty of the university, from the fact that it was the first of the two to form the alliance, inferred that its ideas should prevail and the power of directing the policy of the school should rest in its hands. When it was discovered that the chairs were equally divided between the two schools and the influence of Bellevue in voting power was equal to its own, an objection was promptly made. The council standing upon its decision that Bellevue should have equal influence and rights with the other school, the faculty of the latter institution had no recourse except to withdraw or ask the Bellevue faculty to withdraw. The latter was decided upon, and Bellevue, in response to a written petition, withdrew in a body from the university.

In the meantime the university had procured additional property adjoining the former medical school, and to meet the taxes and assessments upon this the resources of the medical school were drawn upon by the council. This necessarily diminished the amount of money available for professorial salaries, and the latter, therefore, have been reduced. Moreover, the medical committee, by failure of reelection of its members to the council and by resignation, has been disrupted. Friction has thus been generated and steadily increased as closer intercourse in the management of details became necessary, until finally the faculty was convinced that a further continuance of its relations with the university was unendurable. The petition was, therefore, submitted by the University Faculty, praying for release from their relations because of the failure of the council to carry out its part of the contract, and demanding a restoration of the property to its original holders.

In reply to this the council of the university affirms that it has carried out all the provisions of the agreement, and insists, moreover, that as the funds transferred to it are trust funds, it has no legal right to relinquish its trust by reconveying the property to the original holders. Moreover, the council, evidently fearing that the apparent estrangement of the faculty might lead them to be indifferent to the harmonious working of the university, sent to each professor a letter conditioning his reappointment for

another year upon a promise that he accept the statute and rule of the university regarding the medical college, and that he use his influence to consummate the transfer of the Loomis Laboratory and its endowment to the university council. An answer was requested not later than March 31st. To this letter no reply was made by any one of the six professors, and the inference is that as the time for the reply has passed the appointments will expire with the college year, May 18, 1898. In this condition the matter now rests.

From certain aspects this whole matter may be regarded as a family affair, and therefore not coming properly within the domain of public comment; but any action of a medical school is legitimately the subject of review, comment, and criticism whenever it affects the standard and the quality of medical education. Where the responsibility lies for the disagreement under discussion the facts now at hand will not justify a decision.

THE FAILURE OF THE NEW YORK DISPENSARY BILL.

AFTER a session of three months, replete with as disgraceful political jobbery as has ever been recorded in the annals of the State of New York, the Legislature has finally adjourned, and the nauseating odor of its misdeeds is strong in the nostrils of the rank and file of the two great political parties as a reminder of the misplaced faith reposed in their representatives. A majority of the honest bills introduced were allowed to die peacefully in committee, or, if favorably reported and passed, were so littered with amendments as to entirely defeat their original object; while those in connection with which there was a palpable "rake-off" for somebody, were railroaded through without conscience and with disgraceful haste.

Now that the curtain has been rung down on the final act, the calciums turned off, and the actors dispersed, it is not amiss to glance at the results for the benefit of that portion of the audience represented by the medical profession and determine wherein it has been the gainer or loser in its efforts to obtain just legislation. Undoubtedly the most important measure up for consideration was the so-called "Dispensary Bill," designed to correct the prevailing crying abuses of medical charity by placing all dispensaries under the supervision of the State Board of Charities. As is well known, this bill emanated from a joint-committee composed of representatives from committees appointed by twelve of the largest medical societies of the State, having their headquarters within the limits of Greater New York. It embodied the result of much painstaking investigation on the part of the committee, and was indorsed by the societies referred to, not once only, but in several instances a second time; not by a faction, as has been claimed, but unanimously. It was so framed as to provide for the welfare of the sick poor, and to facilitate the means by which they might receive medical aid. It was just in its provisions, equally to the laity and to the profession, and its enactment would have resulted in untold benefit to all concerned, whether viewed from a humanitarian, economic, or medical standpoint. Yet, after passing the Senate unanimously, thanks to the untiring efforts of Senator George W. Brush, to whom the entire profession of the State owes a hearty vote of thanks, the bill was allowed to die in the Committee on Public Health of the Assembly in spite of every effort on the part of its sponsors to have it reported.

The Assembly Committee on Public Health was composed of Miles W. Raplee of Dundee, Yates Co., chairman; Edger L. Vincent, Maine, Broome Co.; George A. Stoneman, Machias, Cattaraugus Co.; Dennis W. Evarts, Manning, Orleans Co.; Hyatt C. Hatch, Atlanta, Steuben Co.; Joseph Schulum, Dominick Mullany, and John F. Brennen, New York City; Otto Wicke (druggist), Brooklyn, and Cyrus B. Gale, Jamaica, L. I.

In exactly what way influence brought to bear upon the presiding officer of a legislative body percolates through devious channels and effectually gags a committee, is one of the secrets of the trade. Perhaps the contents of a loving-cup at times has something to do with it. The efforts of certain physicians of the regular school, and of a handful of dispensary managers, whose opposition to the bill was based wholly upon selfish personal motives, might have been successfully combated so long as the fight remained in the open, but some insidious and malign influence was too powerful, and so the plainly expressed demand of upward of 5000 reputable medical men for reform was refused and ignored.

The homeopathic opposition to the measure, previous to the date of the annual meeting of the State Homeopathic Medical Society at Albany, was wholly unexpected, as it was rightfully supposed that the provisions of the bill were equally favorable to both schools. It is to be regretted that the homeopathic practitioners of the State, and especially those residing in the City of New York, have seen fit to array themselves on the opposite side to those of the regular school in connection with efforts to obtain legislation, for it is natural to suppose that although they work in independent channels, their methods of organizing and managing dispensaries and hospitals must be much the same, the abuses the same, and their correction the same.

The adequate control of dispensary abuse is bound to come, and next year's session of the Legislature will find the same earnest workers on hand to further a bill having this object in view. More than this, another bill, of vital interest to every medical practitioner in the State, will be introduced and, it is hoped will become a law. This bill, according to information just at hand, will contain three separate provisions: first, making a husband and wife jointly liable for a bill for medical services; second, making such a charge a first lien on a deceased patient's estate; and, third, in the event of judgment being obtained against a debtor whose income is derived from a salary, authorizing the creditor to obtain, and the proper court to grant, an order requiring the debtor's employer to set aside a percentage of his salary each month until the judgment has been satisfied. Such a law as the last-named is already in force in at least two States, and its working has produced excellent results. At the present time there is no law on the statute books of this State offering protection to the medical profession in this connection, and it is high time that combined and persistent effort should be made to obtain favorable legislation. Elections will occur in many of the Assembly districts of the State before the next meeting of the Legislature. Many of the present legislators will go before their constituents for reelection, and many new candidates for legislative togas will urge their claims. Much of the obliquity pertaining to the session that is past will be forgotten, and loving-cups for the time being will be relegated to the top shelf of an up-stairs closet. Unity of action and purpose on the part of the medical profession is imperative if success is to be achieved in legislative matters concerning the welfare of its members. Every physician should regard it as a personal affair; every prospective legislator should be interviewed and a pledge obtained in support of these bills. Personal support of a candidacy should be forthcoming only in the event of such a pledge being given. And the time to organize is *now*. It should not be deferred until a few days before election. We have all heard the cry "*Manana, Manana!*" too frequently repeated during the last few exciting weeks, and its sound is not a pleasant one.

THE EXPOSITION OF HYGIENE AT NEW YORK CITY IN MAY.

FROM April 25th to May 31st an International Health Exposition will be held at New York in the Grand Central Palace, Lexington avenue. The New York Household Economic Association and kindred organizations will cooperate with the management of the Exposition, which will embrace everything relating to health, both indoors and outdoors, and illustrate the sanitary and hygienic progress of the century. Mr. Charles F. Wingate is the supervising director. All exhibitions of this description should be encouraged, for they are of distinct benefit: first, in bringing together for comparison the latest sanitary appliances and methods, and, second, in educating the public in their use and benefits. The second point is perhaps the most important, because whatever sanitarians may do with regard to the improvement of their science, the resulting benefits to the health of the community must be tardy unless the public are ready to aid in the application of the improved processes. In our own country we have far too few of these exhibitions, and sanitary science would be much benefited if the public were better educated in this matter.

ECHOES AND NEWS.

A Medical Municipal Officer.—M. Navarre, the new President of the Municipal Council of Paris, is a member of the medical profession.

The Emperor of Abyssinia's Physician.—The physician to the family of the Emperor of Abyssina is a young Swiss woman, a graduate of the University of Zurich.

The Hospitals of Paris.—It is estimated that no less than $15,000,000 would be required to satisfactorily increase

the bed accommodation and improve the sanitary arrangements of the Paris hospitals.

Quarantine against Jeddah.—Plague regulations have been ordered at Cairo against arrivals from Jeddah, where three deaths from the plague have occurred among pilgrims on their way to Mecca.

Medical Congress at the Paris Exposition.—Section No. 6 of the Congress to be held in Parisin 1900 will be devoted to medical science. A special building within the grounds of the Exposition will be reserved for the Congress.

A Doctor Dies from the Plague.—Dr. P. N. Davda, assistant medical officer of the Arthur Road Hospital, Bombay, died from the plague although he had been inoculated three weeks before with 10 cubic centimeters of Dr. Yersin's serum.

Feeding of Infants.—According to *Pediatrics* there is in France a law forbidding the giving of solid food of any kind to infants under one year of age without the written authority of a physician. The use of feeding bottles with long rubber tubes is also forbidden by law.

The Proposed Academy of Medicine. — Steps are being taken to form an Academy of Medicine in Toronto. The societies interested in the movement are the Toronto Medical Society, the Clinical Society, the Pathological Society, and the Toronto Medical Library Association.

Sanitary Mission.—A special sanitary mission, composed of five medical men, has been appointed by the Turkish Government and will soon leave Constantinople for Mecca. The object of the mission is to examine into the sanitary conditions of the pilgrims who will be gathering there.

The Plague in India.—The plague continues unabated in Bombay. Pneumonic symptoms are now a marked feature of the epidemic. It is also stated that influenza is prevalent. The mortality from all causes during the week ending March 26th is given as 2080—a rate of mortality of 130 per 1000 per annum, the average being 44 per 1000.

Long Island College Hospital.—The ex-internes of this hospital have associated themselves together in an alumni society, and during March last gave themselves a dinner. They are officered as follows: Dr. Frank E. West, president; Drs. Henry N. Read, J. A. McCorkle, and S. J. McNamara, executive committee, and Dr. B. O'Connor, secretary.

Contagious Disease Hospital for Orange, N. J.—It has been decided to erect by means of public subscription a hospital for the isolation of cases of diphtheria and scarlet fever, to be supported by the Board of Health and by fees paid by patients. The hospital will be in charge of a superintendent, and each patient will be attended by his own physician.

Red Cross Relief in Cuba.—The Cuban Red Cross bulletins have announced that the relief work in Havana hereafter will be under the supervision of Dr. Guzman, a Cuban, and Dr. Egan of the Red Cross Society. In case of a disagreement between them the American Consul-General is to act as arbitrator. The schedules show 171,000 persons in the island entitled to receive relief.

Additional Army Surgeons.—A bill was recently introduced into the House of Representatives providing for the appointment of fifteen additional surgeons for the army, with the rank of first lieutenant. The bill also authorizes the Surgeon-General to appoint as many assistants as he deems necessary in case of war with Spain, the salary of each to be limited to $150 per month.

The Free Home for the Dying.—There is in London an institution known by this name. It is absolutely free and the only passport to admission is a medical certificate to the effect that the applicant is believed to be dying. No distinction as to nationality, sex, age, or creed, is made. During the year 1897 forty-eight patients were admitted; of these thirty died, nine were discharged, and nine remain.

"Divine Healer" in New Jersey.—Considerable indignation has been aroused among the residents of Mount Holly, N. J., by the death of a young man who had been under the care of a "divine healer." Although he had been ill three months no physician was called to attend him. The attention of the Burlington County Medical Society has been called to the matter, and the Grand Jury will be asked to take action.

Woman's Medical College.—The formal opening of the new building of the Woman's Medical College of the New York Infirmary for Women and Children was held on the 21st ult., it having been rebuilt since its partial destruction by fire about a year ago. The building is now six stories high, has an amphitheater of large size, spacious recitation-rooms, and chemic and pathologic laboratories fitted with modern appliances and apparatus.

Resolutions on the Death of Dr. Sparkman.—At a recent meeting of the Georgetown Medical Society of Georgetown County, South Carolina, the following resolutions were read and unanimously adopted: "Resolved, That in the death of Dr. James R. Sparkman the medical profession of Georgetown, as well as the profession of the State, has lost one of its most accomplished and useful members; That our warmest sympathy be tendered to the family in their bereavement in the loss of this good and faithful servant, and that a page in our minute book be inscribed to his memory."

Rush Medical College.—Liabilities amounting to $71,000 have been erased from the ledger of the Rush Medical College, Chicago, and its complete affiliation with the University of Chicago is now practically assured. This was one of the conditions set forth by President Harper when the scheme of annexing the medical school to the University was first mentioned. The principal donors were Drs. Ephrain Ingals, Nicholas Senn, and E. Fletcher Ingals. Hereafter, in accordance with another condition, the Board of Trustees will be chosen from representative business men instead of from the Faculty.

An Important Decision by the Commissioner of Charities.—The first break in the present system of appointments to the visiting-staff of the public hospitals of New York has been made by the recent decision of the Commissioner of Charities, in which he has decreed that no member of the visiting-staff of any of the hospitals in the Department of Charities loses that position by resigning from the medical school in whose division he is serving. The effect of this must naturally be that men resigning from medical schools carry with them their hospital appointments and so gradually deprive the schools of the power to control hospital positions.

A Drinking-Fountain.—An ingenious drinking-fountain has been devised by a citizen of Rochester, N. Y., to supplant the use of cups and other drinking-vessels in public places. It consists of a marble pedestal about 3½ feet high, capped with a funnel-shaped basin twelve inches in diameter connected with the water-supply. Upon pressure of a lever at the base of the basin a jet of water shoots up from the center of the basin and into the mouth when the head is bent over, and in this way thirst is abundantly satisfied without the intervention of a drinking-vessel of any kind. A movement is on foot to have these fountains placed in the public schools of Rochester.—*Sanitarian.*

A Gift to the New York Academy of Medicine.—At a meeting of the New York Academy of Medicine held April 7, 1898, ex-President Grover Cleveland, in response to an urgent request, presented to the academy an autograph copy of the address delivered by him at the celebration of its semi-centennial anniversary. The manuscript consists of nine closely written pages of letter-paper, which have been artistically framed by Tiffany & Co., each page occupying a panel by itself. This gift from the ex-President supplies another invaluable feature to the rapidly accumulating collection of portraits, relics, and mementoes which decorate the walls of the Academy.

The American Hospital at Teheran.—The hospital conducted by the Presbyterian missionaries from this country to Persia has received a gift of more than $1000 from Persian officials, and the European colony, including Russians and Turks. The American Minister, Hon. Arthur Sherburne Hardy, organized an entertainment or concert with the help of the Persian Prime Minister, and a number of the diplomatic corps, by which so marked a success was achieved that the Shah requested a repetition of it at his palace. The Shah himself attended the second concert, and his distinguished guests were entertained, at its close, on his behalf, and further donations to the hospital were received from several Persian magnates.

Hydrotherapy and Foreign Spas.—It has always been a question as to how much of the benefit derived from treatment at foreign spas is due to the enforced regimen and how much to the waters themselves. From a recent discussion in the British Balneological and Climatological Society, it would seem that the waters have very little to do with it. One member declared that it is a matter of indifference whether the bath water be supplied at a German spa or by an English water-works company—the result is the same. A French physician from Aix-les-Bains admitted that he did not claim any special virtue for the water at that resort, and said that the good results obtained there are due to the method employed.

Medical Society of Kings County.—This society, through its organ, the *Brooklyn Medical Journal*, announces the receipt of a gift of $2000 as a library sustentation fund. The donor, Mrs. John L. Zabriskie, has chosen this as a means of commemorating her late husband's interest in this society, and its literary deeds and needs. Her design is that her gift shall *in perpetuo* be known as the Dr. John Lloyd Zabriskie Memorial Endowment Fund for the Library, and this library is already of such size and is in such good hands that there can be no doubt that she has in fact erected a living monument to her eminent husband. The name of the Zabriskie family has been identified with this society since 1829, in the person of Dr. John B. Zabriskie, father of the physician above mentioned.

Hygienic Laboratory in Costa Rica.—The National Institute of Hygiene of Costa Rica is situated at San José, the capital. The work of this department during 1897 included a considerable number of chemic analyses as well as many histologic and bacteriologic examinations of urine, feces, sputa, tumors, etc. Larvæ and ova of the ankylostomum duodenalæ were discovered in five out of sixteen samples of feces. The institute is amply provided with apparatus for the production of the Röntgen-rays and for microphotography. Dr. Emilio Echeverria, the director, incidentally mentions in his report that at the ordinary pressure at San José water boils at 95° C. (203° F.), a circumstance which, of course, shows that the town is situated at a great elevation. In connection with the institute there is a department, presided over by Dr. Bojas, for the preparation and inoculation of antileprous serum.

Obituary.—Dr. William H. Johnston, one of the founders and the Dean of the Birmingham Medical College at Birmingham, Ala., died of apoplexy on April 3d, in his eightieth year. He was born in Lincoln County, N. C., educated in the State University, and served gallantly in the Twenty-third North Carolina Regiment, Confederate Army. After the war he was graduated in medicine at the University of the City of New York, and served eighteen months at Bellevue Hospital, New York. For a short time he practised medicine in the latter city, moved to Selma, Ala., in 1872, and to Birmingham in 1886. A widow and four children survive him.—Dr. George S. Little of Brooklyn, died on the 30th ult., aged seventy-two years. He had been several years an inspector of the Board of Health of that city. He was a veteran officer of the late war, having served with two militia regiments. About forty years of his professional life was spent in Brooklyn.

Ants and the Plague.—A Bombay correspondent of the *Times of India* describes some remarkable observations which he made upon a nest of ordinary red ants, which

infest the storerooms in India. The house in which the ants had their nest was infected with plague virus as shown by the number of rats and bandicoots which were daily found dead. One day it was noticed that the ants were moving and taking all their belongings to a new home about nineteen feet from the old nest. Further observation revealed that many hundreds of the insects were dead and dying, that the dead had been carried away by their companions about a foot distant from the new home until a little reddish heap was formed, and that much of the stores of rice had been cast away as if unfit for food. Two days later, the mortality still continuing, a further move was made, the dead ants and the discarded rice being left behind. This performance was repeated several times until an accident destroyed the nest and prevented further observations.

The Prescribing Druggist.—The evil of counter-prescribing was recently well illustrated at an inquest held in Derby, England, upon the body of a woman, seventy-five years of age, who died of pneumonia and in whom there also existed chronic Bright's disease and arteriosclerosis. A physician who was called in just before the patient's death found her under the influence of some narcotic, and it was ascertained that she had taken sixpennyworth of cough mixture which had been prescribed for her at a neighboring drug-store. At the inquest the druggist said that the cough mixture was his own and that he did not want to make the formula public, but he was directed to write it out for the benefit of the jury. In this way it was learned that two ounces of the mixture contained forty minims of morphia (presumably liquor morphia acetatis or hydrochloratis) besides compound tincture of camphor. The dose for an adult was one teaspoonful. This would contain about two and a half minims of morphia solution —not an excessive dose if not repeated, but there were no directions upon the bottle as to how often the mixture was to be taken. As it was clearly shown that the woman died of pneumonia, although the morphia may have hastened her death, the druggist was not held, but was strongly censured by the jury.

CORRESPONDENCE.

OUR PHILADELPHIA LETTER.

[From our Special Correspondent.]

TREATMENT OF ENTERIC FEVER BY SYSTEMATIC COLD BATHING AT THE GERMAN HOSPITAL—MUNICIPAL HOSPITAL—STATE BOARD OF MEDICAL EXAMINERS —MORE "FRESH-AIR PAVILIONS"—SUCCESSORS TO DR. PARVIN AT THE JEFFERSON MEDICAL COLLEGE —DR. W. M. L. COPLIN—DR. EDITH BAKER—$5000 FOR THE JEWISH HOSPITAL.

PHILADELPHIA, April 9, 1898.

ANOTHER valuable contribution to the treatment of enteric fever by the Brand method was made by Dr. J. C. Wilson in a paper, entitled "Observations upon the Treatment of Enteric Fever by Systematic Cold Bathing as Practised in the German Hospital, Philadelphia," read before the College of Physicians of Philadelphia, April 6th. This communication included the cases treated in this institution during the years 1896-97, since Dr. Wilson's last report was made. The total number of patients treated during these two years was 217, of which number 64 were treated in 1896, and 153 in 1897. The combined mortality, was 7.8 per cent., the mortality for 1896 being 10.9, and for 1897, 6.5 per cent. The average mortality of 403 cases of enteric fever treated in the Pennsylvania, Presbyterian, and Episcopal Hospitals of this city, by the more or less systematic application of the cold bath during 1896 (the latest statistics given by these institutions) was 9.92 per cent. The average mortality of 5484 cases in Philadelphia, treated by various methods, during the period covered by Dr. Wilson's report, was 14.76. The following statistics of the German Hospital cases were given: Combined per cent. of hemorrhage: 1896, 6.2 per cent.; 1897, 8.5 per cent. Hemorrhage in fatal cases: 1896, 2 cases, or 28.6 per cent.; 1897, 3 cases, or 30 per cent. Average day of disease on admission to the hospital: 1896, 9.3; 1897, 8.2. Average length of patients' stay in the hospital: 1896, 36.3 days; 1897, 35.2 days. Relapses occurred during 1896 in 12 cases, or 18.8 per cent.; during 1897 in 29 cases, or 18.9 per cent. Multiple relapses occurred in 2 cases, or 1.2 per cent. in 1897; none occurred in 1896. The average number of baths given in each case was 48.6 in 1896, and 51.3 in 1897. Albuminuria was noted in 30 cases or 46.9 per cent. in 1896; in 1897 in 59 cases, or 37.9 per cent. The following complications were noted: Nephritis, 1896, 12 cases, or 18.7 per cent.; 1897, in 44 cases, or 28.7 per cent. Phlebitis: 1896, in 1 case, or 1.6 per cent.; 1897, in 3 cases, or 1.8 per cent. Suppurative otitis media: 1896, in 1 case, or 1.6 per cent.; 1897, in 2 cases, or 1.2 per cent. Sciatica and rheumatic fever were noted each in 1 case, 0.6 per cent. in 1897. Pleurisy: 1896, 1 case.

With the exceptions of acute abdominal inflammation, hemorrhage, and perforation, the baths, repeated when the axillary temperature reached 101.4° F. three hours after a preceding bath, constituted the regular treatment.

It is of interest to observe that during defervescence two baths daily were given irrespective of the temperature. Calomel, in doses of 7½ grains, was given at the beginning of the attack, but never after the tenth day of the disease. Cold compresses and ice-bags to the abdomen was recommended for pain and hemorrhage; and stupes and external cold were applied to the abdomen for tympanites. When specially indicated, aromatic spirits of ammonia, ammonium carbonate, strychnin, caffein citrate, the bromids, chloral, opium and its derivatives, and hyoscin were administered, For the anemia, iron, preferably in the form of Basham's mixture, proved beneficial. The results of these last two-years' work of Dr. Wilson in the German Hospital brings the total number of cases treated by him in this hospital from February 1, 1890, to January 1, 1898, to 741, of which number 55 were fatal, or a death-rate of 7.42 per cent.

As a result of a personal inspection of the Municipal Hospital for Contagious Diseases, Mayor Warwick, in his annual message to Councils, has drawn attention to the disgraceful neglect which has been shown by the authorities in providing the proper means for the improve-

ment and maintenance of the institution. In the words of the Mayor, "the main building in its present dilapidated condition is a disgrace to our civilization and a reflection upon our humanity. The heating apparatus is most primitive, and the system of ventilation most incomplete. On the upper floors, where the sick are confined, the food is received in and distributed from bath-rooms which are in close proximity to a double row of water-closets." In spite of the handicaps to their work, the physicians and nurses of the hospital are commended in the highest terms for the cleanly condition of the institution and for their faithful performance of duty under such trying circumstances. The Mayor has requested the immediate appropriation by Councils of the sum of $136,900 for the erection of isolation pavilions, and for other improvements and extensions.

At the annual meeting of the State Board of Medical Examiners (regular profession) held in Harrisburg, April 5th, the following members were elected for the ensuing year: Dr. H. G. McCormick of Williamsport, president; Dr. W. S. Forster of Pittsburg, secretary and treasurer; Drs. S. W. Latta, A. H. Hulshizer, and Henry Beates of Philadelphia; Dr. W. D. Hamaker of Meadville, and Dr. J. K. Weaver of Norristown. The next examinations by the board will be held in Philadelphia and in Pittsburg on June 14th.

Encouraged by the success of last year's experiment in providing a "fresh-air pier" for the use of the public during the heated term, the city authorities have decided to erect several more of these pavilions along the Delaware water-front, to be completed before the commencement of the present summer. The plans, which have now been completed by the Bureau of Surveys, call for pavilions to be erected on several piers owned by the city. The lower decks of these pavilions are to be of granolithic pavement or of asphalt, and will be converted into a sort of public park, with flowers, seats, and electric lights. The upper decks will be used especially as childrens' playgrounds. The pier on which the first new pavilion is to be built is 554 feet in length and 80 feet in width.

The vacancy in the faculty of the Jefferson Medical College created by the death of Dr. Theophilus Parvin has been filled by the board of trustees by the election of Drs. Edward P. Davis and E. E. Montgomery to the chair of Obstetrics and Diseases of Women and Children. In this manner the work will be divided between Dr. Parvin's successors, Dr. Davis assuming the obstetric teaching and Dr. Montgomery having charge of the work relating particularly to gynecology.

At the annual meeting of the Lycoming County Medical Society, held at Williamsport, April 5th, the address on pathology was delivered by Dr. W. M. L. Coplin of this city.

Dr. Edith Baker, at present a physician in the Norristown State Insane Hospital, has been elected pathologist to the Delaware State Hospital at Barnhurst. Dr. Baker's term of service at Norristown will expire January 1, 1899.

The sum of nearly $5000 has been received by the Jewish Hospital Association as its share of the proceeds of the Hebrew Charity Ball, held in this city a few weeks ago.

OUR BERLIN LETTER.

[From our Special Correspondent.]

A SERIES OF TESTS FOR ORGANOTHERAPEUTIC REMEDIES — ACKNOWLEDGMENT OF THE WORK OF AMERICAN PEDIATRISTS—SMALLPOX AND VACCINATION IN PARIS AND BERLIN—CHILDREN'S SUICIDES, HYSTERIA, AND OVERWORK IN SCHOOL.

BERLIN, April 7, 1898.

SOME time ago at the Hufeland Medical Society (an organization founded in honor of the distinguished old German physician Hufeland), Professor Posner made a preliminary report, with demonstrations, of a series of tests for organotherapeutic remedies. Taking advantage of Ehrlich's observations as to the specific reactions produced in certain tissues and cells by various acid, neutral, and basic anilin dyes, he used these substances for the detection of the presence of specific tissues in the remedies as they are dispensed.

This preliminary report would seem to be substantiated by further observation, and it is hoped that this will en able the practitioner to decide, not alone whether a certain preparation said to contain an extract of a particular organ really does contain it, but also approximately how much of the extract is present. This will be a distinct step in advance, and will make these remedies comparable with the ordinary chemic compounds, which, in case of doubt, may be subjected to known tests. Meantime, the physician will not be obliged to depend so absolutely upon the manufacturer of the remedies for their authenticity and proportionate contents.

Professor Posner found that all the different organotherapeutic preparations offered for sale here in Berlin gave, within certain limits, the same reaction as all the others prepared from the same organ, except one series of prostatic preparations, which were distinctly different from those of other makers. This is all the more interesting, as it is not so long ago that medical Berlin was afforded a good deal of amusement by the story of the first prostatic preparations which were placed on the market here. Some one got the idea that extract of prostate might be good for prostatic hypertrophy; on just what grounds is not so clear.

A purveyor of remedies was found to furnish the preparation, and the experiments with it were begun. As is usually the case, in the hands of the man who thought out the line of treatment, it gave good results. Old men who had been persistently catheterized, and who had not been able to urinate voluntarily for years, regained their power of urination. There was residual urine of course, but improvement seemed to continue in some cases.

Reports of cases were published, and many physicians adopted the treatment. Other purveyors of drugs also placed prostatic preparations upon the market. The butchers at the general slaughter-house had been directed by the first firm to furnish them with a certain number of the glands lying at the neck of the bladder, and other

firms were at once furnished with the same. The chemist of one of the drug houses was anxious to do some work on perfectly fresh prostatic glands in order to find, if possible, what the specific substance might be that was characteristic of the glandular secretion and played the supposed rôle in the therapeutic results. He went to the abattoir himself for the purpose of obtaining them, and found, to his surprise, that the butchers wanted to give him seminal vesicles, and not prostates, and that it was this that they had been furnishing the different firms about town who had prostatic preparations on the market. Thereafter the real prostate was substituted for the pseudo-prostate; the results continued to be at least as good as before, and there are a number of physicians in Berlin who use extract of prostate for prostatic hypertrophy and still cure their patients.

This was not the first time such a *mistake* has occurred in organotherapy. Some years ago, Owens of Manchester reported a series of cases of Grave's disease in which cure followed the use of thyroid extract; it turned out later that the butchers had furnished extract of thymus. Under such circumstances it is seen that a series of reliable tests, such as are likely to come from further study of the anilin color-reactions will be extremely welcome.

There is one specialty in medicine in which the work of Americans seems to be thoroughly appreciated over here, and that is in children's diseases. One often hears men like Heubner or Baginsky express the indebtedness of pediatrics to American workers, and Americans are more quoted in this department than in any other. Not long ago Professor Heubner, in a clinic on that special form of chronic nephritis, which he has recently described as occurring in children, and in which there are but very few casts, very slight albuminuria, though the affection is obstinately persistent despite all treatment, took occasion to mention Jackson's work in the same line, and to say a few very commendatory words of Emmet Holt's excellent work on nephritis in nurslings. One is tempted to hope that American pediatrists are prophets in their own country too—Scripture to the contrary notwithstanding.

Apropos of the history of smallpox in Paris since 1870, there has just appeared a comparison of the conditions which obtain in the two cities, Berlin and Paris. Vaccination is not compulsory in France, and since 1870 more than 20,000 people have died in Paris from smallpox. There have been two or three noteworthy epidemics, the epidemic of 1871 and 1872 being especially severe and fatal. Berlin has had no epidemic since the one that occurred among the French prisoners in the city in 1871. Vaccination is compulsory in Prussia, and school and military regulations are so framed that care is taken to provide for revaccination later in life, as well as the original vaccination in early childhood. Paris' lowest death-rate from smallpox for any year since 1870 was in 1895, when only seventeen deaths were reported. Of this state of affairs the health authorities were very proud, and not without reason, since the inability to require vaccination makes it extremely difficult to guard against the spread of the disease when once it has invaded a district. The next year, 1896, a few scattered cases of smallpox occurred in Berlin and two deaths were reported. The excitement over this was very great and a whole series of investigations were undertaken to discover, if possible, where the blame lay.

The comparisons are food for reflection for anti- or only half-hearted vaccinationists (it is hard to say which is the worst) and make a valuable lesson in public hygiene, scientifically and non-politically conducted.

The suicide of three school children within the last few months here in Berlin has called public attention once more to the question of overwork at school, especially to the ill-effects of prize competition and competitive examination. The question of overwork at school has been the subject of a good deal of discussion, and more than one voice has been raised in favor of abolishing competitions and examinations and limiting school work to the morning hours.

It is interesting to note in this connection that neurologists generally seem to be admitting the possibility of the occurrence of hysteria in children much more frequently than was the custom some few years ago.

Charcot thought hysteria in children extremely rare, while Krafft-Ebing and Henoch scarcely admitted that this neurosis occurred in a frank form in children. Emminghaus and Oppenheim have both pointed out that the disease is by no means so rare as has been taught.

Frankly outspoken, they have been able to demonstrate stigmata of the disease in a large number of cases in adults. The drain upon nervous force incident to the strain of school work, when the organism is using all the surplus energy at its command for developmental purposes, is considered to be at the root of the neurosis, and the older observers are not thought to have been mistaken in their judgment, but the new conditions are considered to have created a before unknown tendency to neurotic manifestations at tender ages.

SOCIETY PROCEEDINGS.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY OF NEW YORK.

Stated Meeting, Held March 16, 1898.

The President, L. Duncan Bulkley, M.D., in the Chair.

INTUSSUSCEPTION.

Dr. Simon Baruch: I would like to report the case of an apparently healthy child, five years of age, who was suddenly seized with convulsions. These occurred every five minutes, the child being unconscious during the intervals, and continued all day and the following night, chloroform being administered to control them. Dr. Jacobi was called in consultation, but it was impossible to make a diagnosis at that time, 12 A.M. It was impossible to administer medicine by the mouth, and at 6 P.M. a No. 12 soft rubber catheter was introduced into the stomach through the nares, giving exit to a large quantity of bile and mucus. The stomach was then thoroughly irrigated, and an ounce of castor oil administered through the tube. At 12:15 A.M. the catheter was again intro-

duced, and the castor oil, mixed with about six ounces of bile, escaped. I then felt convinced that the case was one of intussusception. Dr. Kinch, who also saw the child, was of the same opinion. The stomach was again irrigated, and eight grains of calomel was administered by means of the tube. The convulsions still continued. At five o'clock in the morning the child was inverted, and a quart and half of salt solution was injected into the bowel. At six o'clock there was an attack of rigidity with staring eyes, after which the convulsions ceased. At 6:30 A.M. the bowels moved. Shortly after this Dr. Jacobi made his second visit, and agreed with me that there must have been a partial intussusception. Before the bowels moved a tumor could be felt to the right of the median line. The child has since had attacks which resemble those of *petit mal*, and the temperature remains elevated. When she became conscious she displayed an enormous appetite, and constantly cried for food. She has taken large quantities of liquid food and seems to digest it all. The attacks of rigidity have occasionally recurred, and she has developed some strabismus. I suspected cerebrospinal meningitis, Dr. Jacobi agreeing with me, and bromids were given four or five days. The attacks, however, increased in frequency, and the child screamed a good deal. Dr. C. L. Dana was then called in and expressed the opinion that the child was not suffering from meningitis, and thought that the symptoms were more those of encephalitis, or a blood-clot irritating the brain substance. She was then given iodid of potassium, and is now improving, but the diagnosis is still obscure. The temperature has been high, reaching 104° F., at which time two baths at 95° F. were given. There are no signs of typhoid fever, and Widal's-test gave no reaction. She has not had nervous symptoms, except irritability, during the past few days. I mention the case in order to emphasize the value of introducing a catheter through the nose for medication and feeding in patients who are unconscious.

DISCUSSION.

DR. S. H. DESSAU: I recently saw an infant, two-months old, in convulsions. The child had undergone a surgical operation a few hours before—gastro-enterostomy, I infer, although its exact nature could not be ascertained, but it was said to have been performed for stenosis of the pylorus. I was at a loss to know what to do, as I did not know what had been done at the operation, but it occurred to me to give a hot rectal injection. I knew this could do no harm, for the nurse told me that she had been ordered to give two enemas of salt solution after the operation, and had done so. The child could not be put in a bath, for its body was all swathed in bandages. I, therefore, injected into the rectum about a pint of water at a temperature of 110° F., and the convulsions immediately ceased.

DR. ROBERT MILBANK: I have remarked that it is common at autopsies on children to find intussusception which seems to have taken place shortly before death, and to have had no pathologic significance.

DR. FRANK GRAUER: We often find this condition present at autopsies at the Children's Hospital. It probably occurs during the death struggle. I did not hear the paper, nor all of Dr. Baruch's remarks, but I infer that something has been said about rectal irrigation. I do not see how it can be expected that the irrigation fluid will reach high enough to do any good in cases of intestinal indigestion. In making a large number of autopsies on children I have noticed the peculiar shape of the sigmoid flexure of the colon, and how it occasionally dips deep down into the pelvis, and it hardly seems possible for any fluid to reach the iliocecal valve.

About seven weeks ago I saw a child six years of age who was suffering from severe gastro-intestinal disturbance. The child had had measles, and the mother had treated it herself with ordinary household remedies until it developed a severe cough. A physician living in the neighborhood was called, and he made a diagnosis of pneumonia, and prescribed a mixture composed of antipyrin and sweet spirits of niter. He was very much surprised on his next visit to find that it made a peculiar greenish-looking mixture, and thought the druggist must have made a mistake. The child meanwhile developed a high temperature, with vomiting and purging. For a week the patient had fifteen to twenty movements daily, bluish in color, and there can be no doubt that the gastro-intestinal inflammation was caused by this mixture of drugs, producing what is known as oso-nitroso-antipyrin. Professor Fischer of Breslau has called attention to the fact that sweet spirits of niter and any of the coal-tar preparations are incompatible, and should never be prescribed together. Although it is claimed by many chemists that oso-nitroso-antipyrin is non-poisonous, it certainly did produce symptoms resembling those caused by a mineral poison in this case, and for this reason I call attention to it.

DR. BARUCH: I fear there is too great a tendency to combine drugs, and it would be wiser if this were not done, for better effects are obtained when they are given separately.

DR. MURRAY: The following case is interesting because of the obscurity of the diagnosis. A young woman who had had recurrent attacks of pain in the left side was seized with severe pain in the right side in the ovarian region. As it was during her menstrual period she was supposed to be suffering from dysmenorrhea. I examined her *per rectum*, and found an enlarged ovary with an enlarged appendix attached to it. Signs of fluctuation were present. I am watching the case, and intend to operate as soon as the patient has a sufficiently high temperature to impress the parents with the fact that it is necessary to do something for her. I wish also to emphasize the value of a rectal examination in unmarried women. A diagnosis of appendicitis is easily made by this method of examination, more readily indeed, than by abdominal palpation alone.

DR. DESSAU: It is important to impress patients with the necessity of operating during an attack of recurrent appendicitis, but it is sometimes difficult to get the patient to consent. I recently had a case, the patient being a single woman in her second attack. There was a large exudation, and I was very much afraid there was

going to be suppuration. The patient expressed her willingness to submit to operation for removal of the appendix, but as soon as she recovered from the acute attack she went back to her business, and seems to have given up all idea of having an operation performed.

DR. S. HENRY DESSAU then read the paper of the evening, entitled

CHRONIC INTESTINAL INDIGESTION IN CHILDREN.

As chronic intestinal indigestion is one of the most common disturbances of health to which children are subject, the author considered it surprising that the condition has not been more widely recognized as a distinct disease. In children the occurrence of chronic indigestion is explained both by anatomic and physiologic data. The contents of the infant stomach are quickly propelled into the intestines, and the greater part of digestion takes place in the latter viscus. Over-feeding, even when the food is of good quality, is given by the author as the chief cause of intestinal indigestion, although the character of the food and its mode of preparation (when starchy) are important etiologic factors. Children who inherit a neurotic constitution are predisposed to derangements of digestion. A mixed diet, the main portion of which is best adapted to restore waste force and energy, best fulfils physiologic requirements. The carbohydrates and hydrocarbons in proper proportions have been proved by experiment to be the most appropriate. An excess of nitrogenous food should be avoided; for in children there is no great waste of muscular force which calls for large quantities of food of this character.

Infants, during the first four months of life, whether wet-nursed or artificially fed, should not be given more than four ounces at a feeding, and should not be fed oftener than every two hours during the day and every four hours during the night; from the fourth to the eighth month six ounces of food should be given every three hours during the day and once during the night; after eight months, eight ounces of food should be allowed every four hours during the day and once during the night. When the mixed diet is begun the starchy foods, such as oat-meal, barley, wheaten grits, etc., should be cooked not less than one hour, and never more than four ounces should be allowed as a portion.

In older children, milk and not tea or coffee should form the usual beverage until the age of seven, and, instead of fresh bread, stale bread toasted or a crusty roll should be allowed. Meat, not fried or overdone, should be given at the mid-day meal only, and it is best not to give it every day. Cheese, sweets, pastry, and any form of boiled dough should not be allowed. The child should be instructed to eat slowly and thoroughly masticate its food. Between meals the drinking of pure water should be encouraged.

The general appearance of a child suffering from chronic intestinal indigestion is one of disturbed nutrition. It is languid and pale or has a dingy complexion. The circulation is poor, and the hands and feet are cold and blue. There is often some discoloration under the eyes. The skin becomes harsh and rough over the arms and trunk, and in advanced cases there is loss of flesh. There is an irritation about the nostrils and anus. Sleep is restless and disturbed, and the child talks in its sleep or has attacks of night-terror. A curious irritability of temper is a characteristic feature. The appetite may be fairly good, but is appeased by the first few mouthfuls. Thirst is often marked, and occasionally a craving for acids is noted. Abdominal pain is often a prominent symptom, the attacks of which are sometimes very severe. The tongue is moist, glossy, and covered with a thin gray fur. There is often a denudation of epithelium in sharply defined patches, a condition described by Batlin as "wandering rash of the tongue." The urine is clouded with phosphates or contains large quantities of uric acid and oxalate of lime crystals. As a rule, there is constipation, although sometimes the movements are loose and contain thick mucus. The stools are pasty, light yellow in color, and more or less coated with mucus. Prolapse of the rectum is a frequent complication, but, unless of long standing, it disappears without any treatment other than that directed toward improving the condition of the entire intestinal tract.

In the treatment of chronic intestinal indigestion more depends upon the faithful execution of precise instructions in the management of diet and other hygienic requirements than upon any remedies which the physician may prescribe, although such will always prove useful. The diet, therefore, should first be regulated. These children should not be allowed, except in the most limited quantity, any of the starchy foods, such as potatoes, corn, rice, and the breakfast cereals, unless one of the amylolytic ferments, such as diastase, taka-diastase, or peptenzyme, has previously been added. Coffee and tea, also fats and sugar, except in the smallest amount, should be forbidden. Meat will be found to agree with the child better than anything else for a time, until the digestive function is restored. Soups and extracts should not be be given.

Hydrotherapy in the form of warm wet packs followed by a cold sponge douch at 60° F. to the spinal column and abdomen, with brisk friction, as recommended by Baruch, are indicated to promote oxidation of tissue and elimination of waste matter. In the constipation of infants, cold wet compresses to the abdomen followed by massage along the line of the colon will be found beneficial. Rectal irrigation with water at a temperature of 110° F., by means of Kemp's tube, is an excellent way to relieve the attacks of abdominal pain.

In infants, the principal indication is to relieve the constipation and flatulence by means of drugs. For this purpose calomel and bismuth are the only drugs which are recommended. The former should be given in doses of from 1/20 to 1/10 of a grain, in the form of tablet triturates, every two or three hours, from three to five days at a time, and again administered after an interval of a week or ten days. When there is excessive flatulence or an eruption of urticaria, bismuth, either in the form of the subnitrate or subgallate, should be given in doses of 5 grains three times daily.

After the period of dentition is passed, a tonic-laxative,

consisting of cinchona and nux vomica with senna or cascara sagrada, is indicated. To this may be added spigelia on account of its effect in preventing the development of intestinal worms:

℞	Ext. spigelia fl. } aa		3 ii
	Ext. sennæ }		
	(or ext. cascaræ fl.)		3 j
	Tr. nucis vom.		3 i
	Tr. cinchonæ comp.		3 iv
	Syr. sarsaparillæ comp.		3 ii.

M. ℥ i. Sig. One teaspoonful three times daily.

If an intercurrent infectious disease has aggravated the symptoms, 2 grains of iodid of potassium may be added to each of the above doses; or, if sleep is disturbed or enuresis troublesome, 3 to 5 grains of bromid may be added in the same manner. If prolapse of the lower bowel occurs, 3 to 5 drops of the fluid extract of hydrastis may similarly be added.

If the child is anemic, the use of iron is indicated, and the administration of the spigelia mixture may be alternated a month at a time with the elixir of the manganate of iron.

When the round worms or their ova are found, santonin in ½-grain doses should be given three times daily, either with or without calomel, or the combination of fluid extract of spigelia and senna in dram doses may be given night and morning during one or two days.

The remedies mentioned should be administered three months, in alternating courses of three weeks each. After an interval of three or four weeks, the same medication may be again employed with advantage.

DISCUSSION.

DR. BARUCH: At the conclusion of the paper the author said that his purpose was not to propose anything new, and that he had simply gathered together the manifestations common to this disease and considered them under the head of chronic intestinal indigestion. I should go further and abolish the term "chronic intestinal indigestion," for it is only a symptom. I think it would be beneficial to do so, for we would them cease to treat the various manifestations, such as constipation, etc., and would treat the disease itself which, in my opinion, is subacute enteritis of the upper part of the intestinal canal, in other words subacute duodenal catarrh. It is as such that I treat all these cases. Dr. Eustace Smith has shown wisdom in calling this condition "mucus disease," for that is really what it is, and in its treatment calomel is a most valuable agent for cleansing and antisepticizing the upper intestinal tract. Hot water by the mouth is also of great value, because it is not absorbed by the stomach but is immediately poured into the intestine. More valuable than anything else is the rectal irrigation which I very frequently employ. I have seen cases in which it at once reduced the temperature and caused the symptoms to disappear. I employ irrigation daily, injecting from a pint and a half to a quart of warm water; it acts by increasing the peristaltic action of the intestine. It certainly does not reach the duodenum, but I am sure it does reach the iliocecal valve. Whenever peristalsis is thus mechanically increased, important changes in the condition of the patient will follow. In addition to the irrigation, I apply a wet compress at 60° to 65° F. to the trunk. When the temperature is above 101° F. I order a full bath at 95° reduced to 85° or 80° F., according to the amount of fever, and followed by friction. I have not found any necessity for treating such cases medicinally as recommended by the author.

DR. MURRAY: In these cases I generally give broth made of mutton and barley, instead of meat. I find that this seldom disagrees with the child in either acute or chronic intestinal indigestion. These intestinal disturbances are usually preceded by clay-colored, hard, and offensive stools. Calomel and bichlorid of mercury act in two ways, *viz.*, as antiseptics and by promoting the flow of bile. The bichlorid is a more powerful antiseptic than calomel. Another good remedy is eudoxin, a preparation of bismuth which prevents the formation of gas. The dose for a child is 3 grains. I have employed the injections of cool water and know that they increase peristaltic action, diminish tenesmus, reduce the temperature, and cause a free flow of bile.

DR. WILLIAM STEVENS: I can add nothing to what has been said. I think that if the general plan of treatment laid down by the author is carried out, it will be followed by good results and will prevent many serious complications, such as intussusception and convulsions.

DR. L. D. BULKLEY: Since the discussion has wandered somewhat I will relate an experience I had with my own children. One summer while in the mountains they developed intestinal indigestion with diarrhea which could not be checked. I read in an old book that such disturbances sometimes result from cold, contracted by throwing off the bedclothing at night, and that this is especially liable to happen in mountainous regions, where the nights are cool. I acted upon this suggestion, and had the children wear their winter flannels, with the result that the diarrhea ceased without further medication. I have frequently followed this plan in private practice with good results.

DR. DESSAU: The main point which I wished to emphasize is that over-feeding, as a rule, is the great source and origin of chronic intestinal indigestion in children. It begins early and increases as the child grows older. Should the infant escape, it is apt to develop later on.

In regard to distension of the abdomen, in rachitic cases there is always abdominal distension, but we do not usually observe it in other conditions, except in infants. As to nitrogenous food, too much of this is not desirable in a certain class of children—those of neurotic parentage. After the trouble has begun the child is unable to digest starches, and then a nitrogenous diet must be employed. So far as irrigation is concerned, I recommend it for the relief of pain in older children but have never used it in infants except in cases of summer diarrhea. Dr. Baruch speaks of the term subacute enteritis being more suitable to this condition. Possibly this may be so, particularly because there is seldom any lesion. Both Holt and Rotch have made a point of the fact that there is no pathologic lesion in this condition, and for this reason they consider it a functional affection. In regard to the

treatment employed by Dr. Baruch, I shall take advantage of his experience and shall employ it in the future, especially in infants. I doubt if it would have a good effect in older children, and it is in the latter that we see the disease well developed. In this class I believe drugs are required as well as regulation of diet. Chronic intestinal indigestion is frequently mistaken for other conditions, such as malaria, intestinal worms, etc.

MULTIPLE FIBROID TUMOR OF THE UTERUS.

Dr. J. Riddle Goffe: I have here a specimen of multiple fibroid tumor of the uterus. It weighs nineteen pounds, and was removed by supravaginal hysterectomy on March 15th. The specimen consists of all of the uterus above the internal os, together with the tubes and ovaries which are attached to it, and six or eight large masses.

The history of the case is as follows: K. N., fifty-three years of age, unmarried. The patient first noticed some enlargement of the abdomen fifteen years ago when she was thirty-eight years old. The enlargement steadily increased since that time until her abdomen was as large as that of a woman at full term. Menstruation had always been regular and normal in all particulars with the exception that eight years ago she had a severe hemorrage during one of her monthly periods. For this there was no special treatment, and since then she has menstruated regularly. She has never had pain, but during the past year has suffered a great deal from flatulency and bloating, which at times has been so severe as to indicate more or less obstruction of the bowel from pressure of the tumor. Her bowels have been constipated, and she has had annoyingly frequent micturition both day and night. Upon examination I found the abdomen distended by a large irregular mass, part of which was firmly impacted in the pelvis. This rounded prominence filled up the right iliac fossa and reached as high as the umbilicus upon that side. The larger and most irregular mass was located upon the left side and reached to the lower border of the ribs. The cervix of the uterus was crowded forward over the symphysis pubis. Operation was advised, and the patient readily consented, as I had four years previously removed a symmetric fibroid of the uterus from her sister. She therefore entered my private sanitarium on March 14th, and I operated upon the following day.

Upon opening the abdomen, it was apparent that the fibroid mass arose almost exclusively from the posterior wall of the uterus, and that by pressure the entire tumor had been rotated through an arc of 90° from left to right. As the anterior wall of the uterus had not been greatly enlarged, the broad ligaments were not stretched up over the tumor as is frequently the case, but were short and concealed low down in the pelvis, the appendages of the left side being carried by the rotation of the tumor to the front, while those upon the right side were carried posteriorly and so low in the pelvis that they could not be reached. My method of procedure was as follows:

With the tumor still *in situ* but strongly carried to the right side, I was able to sufficiently expose the left broad ligament, to apply a ligature on the proximal side of the appendages so as to remove them with the tumor. With a Deschamps needle threaded with heavy catgut I transfixed the broad ligament from before backward about one-third of the distance down its face and tied the ligature over the free border of the ligament. Threading one end of this same ligature in the eye of the needle I again transfixed the ligament at a point just above the uterine artery and very close to the tumor, ligating as before.

My object in using the same ligature was to pucker up the broad ligament and carry it down near enough to the cervix so that its cut section could be easily covered over with the peritoneal flaps which are yet to be described. The ends of the ligatures were left long and held in an artery clamp to preserve their identity. After applying a temporary ligature near the horn of the uterus to prevent the escape of blood from the tumor, I cut down the broad ligament from its free border as far as it had been ligated. This gave more freedom of motion to the tumor, and, although I was unable to rotate it so as to reach the broad ligament of the right side, I quickly found that it permitted the tumor to be delivered through the incision.

By persistent manipulation the fibroid masses at the lower end of the tumor were disengaged from their impaction in the pelvis and lifted out of the wound, still attached at every point except where the tumor had been cut free from the left broad ligament. While the tumor was held by an assistant, a catgut ligature was applied to the right broad ligament and it was cut as upon the opposite side. The ends of the two incisions in the broad ligaments were then united with a circular incision through the peritoneum only, across the face of the tumor and extending over the upper border of the bladder. This flap of peritoneum with the bladder was then dissected from the anterior face of the uterus and cervix. A similar circular incision was then made on the posterior face of the tumor and the peritoneum dissected down, making a posterior flap to correspond with the one made in front. One end of the original ligature was again threaded in the Deschamps needle and the broad ligament transfixed inside of the peritoneal flaps already described, close to the cervix and below the uterine artery. When ligated this controlled the circulation in the uterine artery, and a similar procedure was carried out upon the right side. The tumor and uterus were then cut away at the level of the internal os.

The four principal sources of blood-supply having been controlled, there was no hemorrhage from the stump, and, after disinfection of the cervical canal with carbolic acid, the two flaps of peritoneum were brought together over the stump and stitched with a running catgut suture. By this last maneuver all cut tissue was buried beneath the covering of peritoneum and there was no raw surface left to favor adhesion to the intestines or omentum. The abdominal wound was stitched with a through and through silver wire suture, according to my usual custom. The patient to-day (twenty-four hours after the operation) is in a most excellent condition and all signs point to an uninterrupted convalescence.

This method of disposing of the pedicle after supravaginal hysterectomy for fibroids is one devised by me in

the spring of 1888, and, although it has gone through some slight modifications since it was first employed, it is practically the same operation. The two operations which claim recognition at the hands of gyneologists in cases of fibroid tumors in which it is necessary to do a hysterectomy are: (1) complete hysterectomy and (2) supravaginal hysterectomy as just described. The advantages claimed for the latter are that the natural supports of the vagina and bladder are still retained and the remaining parts are restored to as normal a position as possible. Moreover, the operation is much easier for the surgeon and can be performed in much less time than can complete hysterectomy.

DR MURRAY: The peculiarity of Dr. Goffe's operation is that he leaves a portion of the cervix and does not open the vagina. Baer of Philadelphia does a somewhat similar operation but does not sew the peritoneum over the stump. He has reported fifty cases with but one death. Martin takes out the whole uterus and drains through the vagina. There is less liability to prolapse of the vagina in Dr. Goffe's operation, and it is claimed that much less effect is produced upon the sexual feeling of the woman if the cervix is left.

REVIEWS.

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY. Eighth session, held in Montreal, Canada, May 25, 26, and 27, 1896. Reprinted from *The Archives of Pediatrics*. Edited by FLOYD M. CRANDALL, M.D.

THE recently issued "Transactions of the American Pediatric Society" show some valuable reports. One of the most interesting of these is on the use of the diphtheria antitoxin. Behring's original claim that if cases "are injected on the first or second day the mortality will not be five per cent." has been found to hold good. When the injections are postponed until after three days the mortality rapidly rises. Considerable attention is given to lumbar puncture, but as a rule the subjects are quite general in their range. The morning and evening sessions for three days were devoted to reading and discussing twenty-four papers, receiving the reports of committees, and electing officers. All in all, the session seems to have been thoroughly successful and enjoyable.

TWENTIETH CENTURY PRACTICE. An International Cyclopedia of Medical Science. Edited by THOMAS L. STEDMAN, M.D. In Twenty Volumes. Volume XI., "Diseases of the Nervous System. New York: William Wood & Co., 1897.

FULLY one-half of Volume XI.—the second volume on diseases of the nervous system—is taken up by Dr. J. H. Lloyd of Philadelphia, who writes on "Diseases of the Cerebrospinal and Sympathetic Nerves." Dr. Charles K. Mills contributes a description of the trophoneuroses, exclusive of scleroderma, akromegalia, and adiposis dolorosa, which latter are from the pen of Dr. Dercum of Philadelphia.

The section on diseases of the spinal cord, by Professor Bruns and Dr. Windscheid is well worthy of careful perusal. Especially is the description of acute anterior polymyelitis to be recommended. The article by P. J. Möbius on tabes dorsalis is followed by a very short description of the "Combined System Diseases of the Spinal Cord," by Professor Strumpell of Erlangen, under which are included "Hereditary Ataxia" and "Hereditary Spastic Spinal Paralysis."

The volume ends with an interesting speculative discussion on pain by Dr. Witmer. This article, we think, should be found rather in a work on psychology than in one on the diseases of the nervous system intended for the general practitioner. Its presence does not, however, by any means detract from the value of the book, which is very readable and excellently scientific.

THERAPEUTIC HINTS.

For Tinea Sycosis.—

℞	Oleat. hydrarg. (five per cent.)	ʒ v
	Zinci oxid. } aa	ʒ ii
	Amyli }	
	Vaselini	ʒ iiiss
	Ichthyol	gr. xv
	Ac. Salicyl.	gr. xx.

M. Sig. For external use.

For Phrenoglottic Spasm in Nursing Infants.—After immediate treatment of the spasm by the inhalation of a few drops of chloroform, the following is to be prescribed:

℞	Tinct. moschi	gtt. xx
	Tinct. belladonnæ	gtt. x
	Aq. laurocerasi	ʒ ii
	Syr. aurantii	ʒ v
	Aq. lactucarii	℥ iii.

M. Sig. Give five or six teaspoonfuls twice daily.

—*Vergniaud.*

For Fetid Perspiration.—

℞	Chloral hydratis	gr. xxxv
	Sodii boratis	gr. xv
	Ol. fœniculi	O i.

M. Sig. To be used as a wash, night and morning.

Buckskin Dressing for Eczema.—*Davesac* recommends the application of buckskin over the ointment, which is then kept moist and not absorbed by the covering. It does not cause irritation, is easily cleansed, and, while fitting smoothly over the protected part, it readily yields to every movement.

For Chronic Gonorrhœa.—

℞	Airol } aa	ʒ ss
	Acaciæ }	
	Aq. dest.	℥ ii.

M. sig. To be used as a urethral injection once daily.

Powder for Infantile Eczema.—

℞	Menthol	gr. viii
	Ac. salicyl.	gr. xv
	Bismuthi subnit. }	
	Lycopodii }	
	Talci veneti } aa	ʒ v.
	Amyli }	

M. Sig. For external use.